

'Maths first' urged in teacher training

by Clive Cookson
science correspondent

Mathematics must be given priority over other subjects in the training and employment of teachers, two of Britain's most influential mathematicians have urged.

In the annual Cockcroft Lecture at the University of Manchester, Institute of Science and Technology Dame Kathleen Ollerenshaw said the severe shortage of maths teachers could be alleviated almost immediately if the subject were treated as a special case.

For example, married women with mathematical qualifications who wanted to return to teaching were often unable to get jobs because schools in their area were already fully staffed and teachers were already teaching mathematics without any mathematical qualifications or competence. These women should be given priority for vacancies created by schools moving those teachers who were "manifestly ill-equipped" so that there was "at least one competent mathematician in each school".

Dr Edwin Kerr, chief officer of the Council for National Academic Awards, made a similar suggestion in his presidential address to the Mathematical Association's recent conference. "I suggest that L.A.E. and head teachers fix an establishment target that when vacancies arise these posts are only filled on a permanent basis, by well-qualified teachers."

Both Dame Kathleen and Dr Kerr emphasize the importance of well-planned and coordinated in-service training. They said mathematics should be given priority when places were allocated on courses.

Dr Kerr said inadequately qualified people should be barred from employment as mathematics teachers, after a date to be specified. Dame Kathleen suggested that schoolchildren be told that O-level mathematics would eventually be a required entrance qualification for all teacher training.

She outlined 17 points of a long-term strategy for the revival of mathematics education. Some of the most important were:

- To set up local mathematics centres (on the lines of music centres). They could be just a base for mathematical games, chess, and competitions, or they could offer O-level and A-level classes and help with homework after school hours or at weekends.
- To ensure that mathematical talent is noted whenever it appears (especially in the very young) and is then fostered.
- To make sure that each part of the mathematics syllabus tests the ability to think and to read and write full mathematical sentences.
- To remove high fillers from mixed ability mathematics classes and develop their special talents separately for at least one session per week.
- To devise and provide benchmarks so that teachers know what is expected of their mathematics classes.



Dr Edwin Kerr and Dame Kathleen Ollerenshaw agreed on priority for mathematics.

Workers' Education Association rally Call for grants 'integrate part-time to be earmarked' work fully'

Reports by Sue Reill

Local education authorities are not in a strong enough financial position to give more to adult education, Mr Andrew Fairbairn, chief education officer of Leicestershire, said in a possible note to the Workers' Educational Association's annual conference held at Harrogate last week.

Mr Fairbairn warned that it was "hopeless" to expect L.E.O.s to protect this sector when the Government in its public expenditure white paper had singled it out for cuts.

Calling for the introduction of "earmarked" grants for particular sectors of education Mr Fairbairn warned that the present Rate Support Grant arrangements militated against the authorities helping the adult education sector which was responsible for adult education. The National Institute of Adult Education and the newly-proposed national advisory council for adult and continuing education should now spearhead a campaign to underline the positive contribution this sector could make to educational development.

Mr Fairbairn added: "If education is to be properly comprehensive it should be relevant and meet the needs of the whole community." Education in schools should be an integral part of the total education system demanded more as they went forward into adulthood.

Commenting on the current financing arrangements he said: "The secretary of state needs to ensure that the education service is administered by the fairest means. If grants for different parts of the education service were earmarked, local education authorities would be able to allocate funds quantitatively."

The country now needed a new breed of teacher capable of working in the different education sectors. Many teachers taught only in one sector and "knew nothing and cared less" about what was happening elsewhere.

Industry brain drain begins with Oxbridge—Dr Sloman

from Paul Moorinan EDINBURGH

Britain's brightest students were still attracted to Oxford and Cambridge, Dr Albert Sloman, vice-chancellor of Essex University, said here last week. For many their subsequent objective was either to stay at Oxbridge, work in other universities or go into the professions. They tended to avoid industry and government.

Dr Sloman, speaking at a meeting of more than 70 university heads from 21 European countries, called for far closer collaboration between British universities and industry.

But the cooperation should not be at the expense of continuing to give students a general, broad-based education, he stressed. "It is not the situation in Britain," he said. "In France, where many of the cleverest students went on to general education in a grande école to train to be specialists in government or running the country." And he said it was "lamentable" that pupils in British schools were allowed to give up "central subjects" very early during their secondary studies. They again meant they were being channelled into one into a specialist pattern.

Organized by the Conference of Rectors of European Universities (CRE), the theme of the two-day meeting was "The Social Relevance of University Teaching".

Those taking part from Britain included the principals of the universities of Aberystwyth, Dundee, Edinburgh, Glasgow, Heriot Watt, St Andrews, Stirling and Strathclyde; the vice-chancellors of Essex, Reading and the University of Wales; and the secretary-general and secretary of the Committee of Vice-Chancellors and Principals.

Higher education today was very expensive, said Professor Ludwig Raiser, the CRE's West German president, and the general public was understandably concerned about whether it was getting value for money.

Belgrade memo may provoke Eastern bloc

by David Walker

The CRE is to send a six-page memorandum on higher education cooperation to the coming Belgrade meeting of heads of government which has been called to monitor progress on the implementation of the Helsinki agreement.

Although the memorandum, which is still confidential, is said to be "intransigent" the fact that the CRE has decided to send it in all is not likely to be welcomed by Soviet bloc universities. Talks aimed at ending the virtual East-West education boycott, which have been going on for more than three years, are now deadlocked.

The CRE has said it would welcome full participation from throughout Europe, but that membership must continue to be restricted to university heads rather than institutions. This, it argues, makes for the best forum for a frank exchange of views.

The Soviet Union, on the other hand, has branded this approach as a "vice-chancellor's club" and accused the CRE of "Cold War" chauvinism. It wants a far more formal arrangement.

CRE leaders here were at pains to stress that the memorandum to Belgrade was not on behalf of "European" universities, but only the members of the conference. It is understood that the document renews CRE's commitment to pan-European cooperation and that criticism of the east in the first draft has been jettisoned.

The memorandum is expected to call for the provision of special funds by the Helsinki agreement governments for academic exchanges; far better liaison between universities and government departments on cultural matters; and for many more joint research projects.

Among the obstacles to cooperation it will list the lack of information about developments in such disciplines as social science in the various signatory states.

More in Civil Service hunt

A big increase in the number of candidates for jobs and a big decrease in vacancies are shown in the Civil Service Commission's 1976 Report. There were 2,640 external candidates for Home Civil Service administration trainee posts, 40 per cent more than 1975, though the commission noted no improvement in general quality and a decrease in the number of very able applicants. The number of jobs available fell by more than 15 per cent to 120.

The reduction in scientific officer posts was much more dramatic. Only 128 were appointed in 1976 (well under half the 1975 figure) out of 7,091 applicants. By the end of the year many departments had been forced to stop recruiting.

The Commission defends itself against accusations of bias in favour of Oxbridge candidates, though it notes that almost 60 per cent of external candidates successful in the 1976 administration trainee competition came from Oxford or Cambridge.

Women comprised 42 per cent of administration trainee candidates for the home civil service, yet only 28 per cent of those appointed were women. In the diplomatic service only one of the 17 successful administration trainee candidates was a woman, although 36 per cent of the 1,189 applicants were female.

There may be trouble ahead

Further student revolt in the 1970s was predicted last week by Professor Donald MacRae of the London School of Economics, but he welcomed it as a protest against the decay of "philistinism".

Professor MacRae was speaking at the launch of a new book about the "crisis of the university" with special reference to the student troubles of the later 1960s. He suggested that the students of the 1970s were different from their predecessors, more hard working. Their protest was against Government interference in sensitive and complex institutions such as the universities.

In his contribution to the book *Hazards of Learning*, a collection of talks given on Radio Free Europe in recent years, Professor MacRae says student boisterousness has been a feature of university life for 600 years. However, the students of the 1970s are always high spirited and student life gives them a chance to experiment.

The book contains contributions from both the left and right of academic life among them Lord Ashby, former vice-chancellor of Cambridge, Professor Max Beloff, principal of the University College of Buckingham, Professor Alain Touraine, the French sociologist, and Lord James, former vice-chancellor of York University. *Hazards of Learning*, edited by G. R. Urian, Temple Smith, £6.75.

News in brief

US link in adult education research
The National Institute of Adult Education is planning research into the use of volunteers in adult education. The research, which will go ahead if funding can be found, will be undertaken in conjunction with adult education experts in the United States.

Professor H. A. Jones, Vanghan professor of education at Loughborough University and chairman of the Institute, revealed the plans at the end of the NIAE's annual conference at Lancaster University last week.

He said that talks between the Institute and Professor Jack Metzrow, of the Columbia Teachers' College, had taken place.

Vocational role rejected
A studio audience in the BBC Radio Four programme *You The View* voted to broadcast last weekend against the proposition that universities should be more vocational. It rejected the advocacy of Lord Crowther-Hunt, former minister at the Department of Education, and the witnesses he called such as Lord Robens, chancellor of Surrey University. The arguments against vocationalism were led by Dr Kenneth Minogue of the London School of Economics.

Japanese studies' grants
The Japan Foundation Endowment Fund, administered by the University of Sheffield, is offering supplementary grants to postgraduates in social science and humanities seeking studentships from the Social Science Research Council or the Department of Education and Science. The grants will be awarded to those whose research involves Japanese. They will be available from October.

Publishers protest
Twenty-three British publishers have written to the President of the Argentine, General Jorge Videla, to protest above the arrest of two colleagues, Daniel Divinsky and Ana Maria Miller, directors of Ediciones de la Flor, Buenos Aires, a children's book in 1975. The letter asks for information about the fate of the two.

Reading University finance
Sponsored research projects, not computer services, contribute 11.04 per cent of Reading University's income (THE, April 22). Computer services contribute 0.07 per cent.

Adult and recurrent sectors 'ignored' in great debate

The Government's great debate has excluded adult and recurrent education, Mr Bill Hughes, president of the Workers' Educational Association and principal of Ruskin College, Oxford, has claimed.

He maintained that a great debate on education as a whole, relating to society and the world of work, was now needed which might call for a radical readjustment of educational priorities.

Mr Hughes said: "Since 1944 we have concentrated on the needs of initial education, raising the school leaving age, expanding university and technical education. The benefits have gone largely to the limited section of society whose children go on to full time education beyond the age of 16. The majority, mainly working class, part company with the educational system at that age and never return."

Part-time education was being allowed to decline, consideration was not being given to day release for school leavers and paid educational leave was "not being developed," he declared. Even the Open University was designed to cater for those whose education level work while the real need was for an "open" secondary school or college catering for those deprived of education after the minimum school leaving age.

The Department of Education and Science was launching a few pilot schemes for the 16 to 19 age group and had reluctantly established a national advisory council for adult and continuing education which might be allowed to contribute to development in the field in the future.

But, said Mr Hughes, the present report on adult education for addressing the balance to meet the needs of the majority, especially the underprivileged, now requires a comprehensive attack. A combination of necessary to give all people the right to education at a period of their life when they recognized the need.

In his later presidential address to the conference Mr Hughes used the phrase "economic restriction on local education, particularly in the local authority sector, were increasingly severe. If present trends continued this might lead to many worthwhile courses being withdrawn out of the market."

Mrs Williams, Secretary of State for Education and Science, had indicated that some funds for a new advisory council for adult and continuing education would be available if it was able to establish essential priorities.

And initiative that it can give to promoting co-operation of adult education bodies, voluntary or re-deploying present resources and determining the nature of development for the future," said Mr Hughes.

AUT ready to go to Commons after Lords pass London Bill

The Association of University Teachers, which wanted the senate representation modified in favour of the teachers and strengthening of its own consultative status, said the union did not receive copies of statutes that were passed.

Consultations with teachers, it said, were already hampered by inclusion of two representatives of the AUT in the body that was to draw up the new statutes.

Mr Reginald Gardiner, leader of the Greater London Council and a member of the university court, speaking for the university, said he was not in favour of writing into the Bill the necessity of consulting the AUT and other staff unions, but that he was sure consultations would take place.

Other representatives of the university who spoke during the six-day hearing included Dr Frank Hurley, vice-chancellor, and Mr J. H. Hurrell, the deputy chairman of convocation.

The AUT was represented by Mr Louis Blom-Cooper, QC. It was the only body to petition the Bill, although the academic staff of the London University of Economics wanted the school to do so, but were overruled by the governors.

Mr John Akker, assistant general secretary of the AUT, said after the hearing: "The Bill has yet to be considered by the House of Commons, and the Privy Council will also be reviewing the new statutes."

"We wish to correct the impression which may have been given by last week's *FRES* report of the Department of Education and Science's view of the Bill. Broadly speaking, Mrs Williams, Secretary of State for Education and Science, attached importance in the principles embodied in it she made it very clear that she had no comments to make on the clauses as drafted."

"In fact, the Attorney General, who has also reported on this Bill, indicated he considered that it was for Parliament to consider whether the safeguards provided by it were sufficient."

Mr Peter Griffiths, secretary of the university's statutes revision committee, said the university was pleased at how things had gone on the Lords hearing, but was disappointed that the AUT had gone so far as to petition the Bill and that they would not take it any further.

"We feel the Bill is in the interests of the university community as a whole in London."

'More union training needed'

Trades union education is now a distinctive branch of worker education in that another 60,000 training places will be needed in the industrial sector to achieve full industrial democracy, Mr Roy Jackson, of the Trades Union Congress, said.

The WEA had reached 170,000 students in the past year but there was a need for a major initiative if Britain were to match the provision of Sweden.

"We in the trades union movement have to make sure that resources are available. As far as the trades unions are concerned this will mean a massive contribution from volunteers," Mr Jackson said.

Trades union education had come a long way in the past 10 years. There had been increased calls for paid-educational leave but some employers had opposed it.



More accurate long-term records are needed of population changes among the three million or so pairs of seabirds, like these gannets, that breed round the British Isles, a Natural Environment Research Council report says. Present knowledge owed much to the consistent enthusiasm of ornithologists, and they should be encouraged by grants for travel and other expenses. The report describes current research and identifies nine priority areas for future work.

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Dr Brenner to be MRC director

Dr Max Perutz, for 30 years Director of the world famous Medical Research Council Laboratory of Molecular Biology in Cambridge, will be succeeded by Dr Sydney Brenner when he retires in 1979.

Dr Brenner, aged 50, is at present head of the laboratory's cell biology division, and a leading figure in the world of molecular genetics.

"He was born and educated in South Africa (he studied medicine at the University of the Witwatersrand) and came to Oxford for his PhD studies. After a spell working in the United States, Dr Brenner joined the MRC laboratory in 1957.

Dr Perutz had been appointed 10 years earlier when the laboratory had a scientific complement of just two. Dr Perutz himself and Dr (later Sir) John Kendrew. Now there is a staff of 200 and more than 60 visiting research workers.

Dr Perutz and Dr Kendrew were jointly awarded the 1962 Nobel Prize for Chemistry for their work on the structure of haemoglobin.

Engineer courses 'should exoite'

Undergraduate engineering courses should emphasize the excitement inherent in the subject and avoid excessive demands on the students, Mr B. B. Ovary, Registrar for Technology of the Council for National Academic Awards, told a conference at Traut Polytechnic last week.

"If there were 750 academic and academic-related staff on the median point of the lecturers' salary scale, next year's increments would increase the bill by 4 per cent and total university spending by 0.5 per cent.

Obviously other staff received increments as well and the figure normally identified in research councils as 1.7 per cent for 'drift' was reasonable for universities too.

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Surrey 'keeps arts off campus'

The University of Surrey has come under fire for excluding the arts from the campus. The arts committee has accused it of letting this suffer in favour of science and technology.

The committee, made up of staff and students, said in a recent report that it was false and damaging to assume that the community and the arts were limited, or that a technological university had no interest beyond its own academic disciplines.

"Students have continually asked for classes on sites in painting, screen printing, pottery and photography as well as improvisation facilities for drama and music."

Accusing the university of neglecting to provide adequate resources, it said: "By comparison with other universities, this deficiency is serious. Facilities for classes in the visual and plastic arts are either rudimentary or non-existent. There is no place where drama can be performed properly, concerts take place in very unsuitable conditions, and there is no purpose-built exhibition gallery."

The report also criticized the marked lack of coordination and organization of artistic activities which were often frustrated by minor obstacles.

It called upon the university "to be a centre for the arts in the surrounding area, attracting the public to lectures, concerts, films, theatrical performances and art exhibitions. This would be a service to the community and be likely to attract support from outside organizations."

The report has been put before Senate, the university governing body, at a time when the technological universities are reconsidering their image.

Many lecturers believe the scientific image of the former colleges of advanced technology which, like Surrey, received their university status relatively recently, makes them unattractive to potential students.

The arts committee report was received with complete approval by Senate, but its proposals for improved arts facilities, involving a grant of £3,400 were referred to the estimates committee for consideration.

It is not known how many of the proposals will be financially acceptable. The staff and students concerned are still waiting for the report on the estimates.

The estimates committee, a university spokesman, said the estimates committee had not yet held a meeting to discuss the proposals, as their timetable had been disrupted by the student sit-in over tuition fees at the end of last term.

He said the university's provision of £50,000 to help finance students in need would have a severe effect on all areas of spending, and though everyone was in favour of expanding the arts, it might not be financially possible.

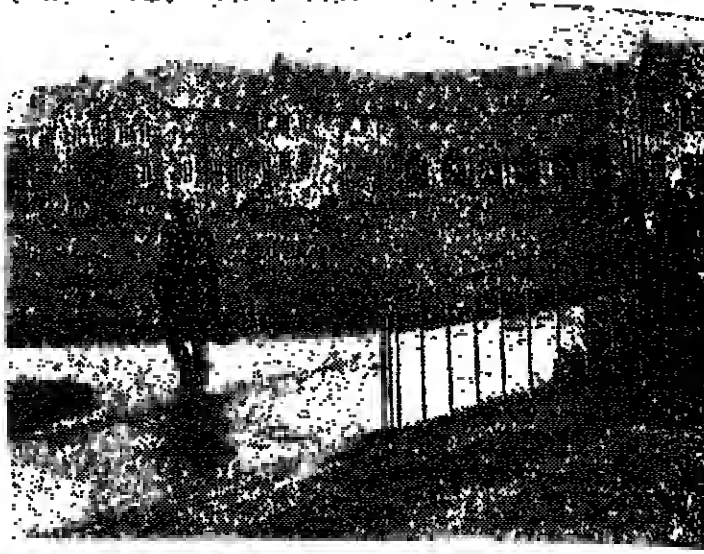
The arts committee recommended that one of the lecture theatres be converted into a small studio theatre for performances and drama teaching, and a room in the teaching block be converted into an exhibition gallery for paintings and displays.

Dr Hans Heimler, a co-opted member of the committee, was particularly concerned about the music facilities. In a letter to the committee, he said the acoustics of the Great Hall were very unsatisfactory. Performances are often ruined by the noise of rain on the roof," he said.

The committee recommended that the acoustics be improved, and, because of the difficulty of booking rooms for arts activities, it proposed that an "initiator" be appointed to coordinate arts at the university.

The estimates committee is due to meet in May, but a decision is unlikely to be taken before June.

Teacher training reorganization: the south west



St. Luke's College, Exeter: in-service future still not clear.

Fierce country v city passions aroused

College of education or scattered thinly over the great stretch of countryside from Cheltenham in Lancashire, and the degree of fervour and patriotism they attract is correspondingly fierce.

In a rural town such as Exmouth, the proposed closure of Rulle College is considered an attack on the economy and culture of the whole community. The arguments there are about the rights of the country against the city, the need for higher education in a place which already feels deprived. Why, argue Rolle's supporters, should difficult and doubtful mergers be allowed elsewhere while their own successful institution is destroyed?

If Rolle closes, it may be possible to establish some kind of community college—but it may not. Whatever happens, the province is torn and should not be swept aside by the prevailing wind of reorganization which favours town rather than country, large rather than small, the diversified rather than the mainly mono-technic institutions.

Even so, some mainly mono-technic institutions have escaped the axe, and Rolle's supporters must have a real chance of making the minister change his mind.

The college can point to a very high first choice preference, a comparatively high number of two A level entrants, and, perhaps most importantly, the fact that it is a major employer of teachers of music, a strategic subject.

Mr. G. Owen Devon's Chief Education Officer, in a memorandum that the minister has not yet wrong that he has suggested there must be a hidden set of criteria. The DES has denied this, but Mr. Owen is still not entirely convinced. "It is a lively college with excellent leadership with a real place in the life of the community," he says.

Hidden criteria apart, the most likely reason for Rolle's inclusion on the list of proposed closures is geography. There are two colleges in Devon. The other one, St. Luke's, a voluntary college, has just become part of Exeter University. Mr. Owen says that this is not the same as having a maintained college, and no one is yet sure how in-service training will be worked out with the university, particularly with the present chaos in the regional coordination of such training. Still, the teacher training places exist and Cornwall and Dorset have only one college each.

If Rolle was saved, the future of the Cornwall colleges, St. Mark and St. John, might be called into question.

Don's diary

Through a dark, glassy

I have spent the last three weeks trying to read Sir William Hayter's biography of W. A. Spooner. Spooner, you may recall, gave his name to that peculiar verbal transposition, the "spoonerism", and was also (I may as well inform a bit of my new knowledge) a Member of New College, Oxford, from 1924 to 1924 and the author of *The Miracles of Tacitus and Bishop Butler*. (A strange choice of reading, perhaps, but then the only alternative on hand during the Easter vacation was a new textbook on an experimental psychology on the role of language in small groups, *Alice Through the One-Way Mirror*, and a disturbingly flat PhD thesis with the isotropic title of *Freud and the Arts: A Phenomenological Study of Partial Displacement*.)

I cannot in all honesty say that I found it exactly riveting (the Spooner biography, that is, but it would not really be fair to blame Sir William for that; there just was not much that the author of *Russia and the World* (and himself) could have done with such a tedious subject. For although Sir William turns up a number of testimonials to Spooner's administrative skills and general kindness it is difficult to believe that this rather confused old man (the biographical evidence suggests an almost instant translation from player in Senior Common Room) would have merited more than a footnote if he had not been the principal contemporary exponent of metaphors (or "spoonerisms" as they have now been rechristened).

Actually Hayter tries to play down this element; only a meagre note



Wellington and his boots (left). Spooner and his 'isms'.

Grave chuckles

This lack of attention to spoonerisms and the otherwise tedious nature of Spooner's life means that you can keep your eyes in the oval direction of the page only if you form a few running hypotheses or associations of your own. Could it be, for example, that Spooner was really a practical joker of monumental proportions who deliberately lived a life so totally devoid of interest and incident that his future biographer would be driven to distraction? Well, there is just enough evidence to keep that thought from taking root for at least half the book.

For a start there's Spooner's menial autobiographical. An obvious source of information for the biographer, you might think. But the obvious Spooner has made matters more complicated. The leaves out large sections of his life, then



Wellington and his boots (left). Spooner and his 'isms'.

Shall be nameless?

No nameless contenders seem to mind, but then I have stopped going to conferences in recent years and may be out of touch. Indeed, the only proper name in common use among social scientists seems to be "chuckery". As far as I can understand, this refers to a particular

Laurie Taylor

The author is professor of sociology at York University.

Prospects for multilingual businessmen improve

Urgent discussions on combining languages with engineering and technology studies for businessmen have been going on between the Department of Education and Science and the Business Education Council.

Mrs Williams, the Secretary of State for Education and Science, replying to questions in the Commons, said that already there were five pilot schemes linking universities with associated firms and another three universities would shortly announce their own proposals. This was a rapid development, considering that the matter only started a few months ago.

Mr Neil Marten (Bairby, C) wondered what encouragement graduates were given to go on to the world for, say, three years, before going on to postgraduate courses.

Mrs Williams said one matter the University Grants Committee was pursuing was a four-year degree course combining a period of practical work in industry with academic studies. There would be further announcements about this shortly.

Among other actions being considered was the possibility of more work experience for teachers in the course of training and induction.

Mr Oakes, minister of state for higher education, in other exchanges, said that the Schools Council, in cooperation with the TUC and CBI, was mounting a project to provide material on the structure of industry for schools and colleges.

Mr Christopher Price (Lob, Lewisham West) asked the Secretary of State what proportion of polytechnics' total income was made up by income from student fees in each year from 1970 to date and what proportion of universities' total income was made up by income from student fees in each year from 1961 to date.

Mr Oakes gave approximate figures as follows:

Year	Universities (total income)	Polytechnics (total income)
1961-62	10.7	
1962-63	11.7	
1963-64	12.4	
1964-65	9.4	
1965-66	8.5	
1966-67	8.5	
1967-68	8.5	
1968-69	9.1	
1969-70	8.8	8.7
1970-71	9.0	8.2
1971-72	9.4	7.7
1972-73	6.5	7.3
1973-74	5.9	7.6
1974-75	5.4	6.0
1975-76	7.5 (est)	7.7
1976-77	7.8 (est)	7.7 (not yet available)

"Total income" has been taken to mean total recurrent general income and has been based on the total income and expenditure accounts in the sectors after allowing for certain self-balancing items.

Universities told to stay out of politics

Universities may engage in social reform, but must stop short of corporate political involvement, Professor Peter Froggatt, the vice-chancellor of Queen's University, Belfast, said last week.

Professor Froggatt, who was guest speaker at an annual conference of the Ulster Teachers' Union in Newcastle, Co. Down, said that the university had been an agent for stability and maintenance of the status quo. "The responsibility for maintaining the cultural heritage and the existing body of knowledge, open for expansion for employment—all this is essentially conservative."

"In preparing people for employment one is occupying the realities of the social structure and preparing them for a place in it rather than the morning the barricades," he said.

A core of university members vigorously resist the idea of a university position on any subject. "Direct university intervention in societal affairs across not only professional independence and academic style, but also a breakdown of social compact that gives freedom and autonomy to the university in return for institutional neutrality," Professor Froggatt argued that vigorous debate on academic theory is the life-blood of critical research. "Debate on the distribution of power and wealth or the rights and wrongs of a political issue is the enemy of such research except for the specialist in economic or political theory."

The university could serve and reform society as a by-product of normal university work, for example by arranging scholarships for South African refugees or by operating a positive discrimination in its selection system, he said.

Bureau for Handicapped Students praised

The annual conference of the Association of Blind and Partially-Sighted Teachers and Students, held recently at Mendham Polytechnic, acclaimed the work of the National Bureau for Handicapped Students.

It called on the Government to commit itself at once to increased and continuing financial support for the bureau.

Knitwear, Bristol fashion

Knitwear, millinery and shoe design are subjects that may be studied over a new BA degree course in fashion marketing at Bristol Polytechnic in September.

The course will aim to give students knowledge of the techniques and methods of the industry and encourage them in their own creative work.

Initial teacher training should cease at Rolle College and the Camborne Outpost.

Provision in the Gloucestershire Institute of Higher Education should be reduced to 500 places; teacher education in home economies at the Gloucestershire College should be discontinued; and St. Mary's and St. Paul's colleges should be amalgamated on St. Mary's site.

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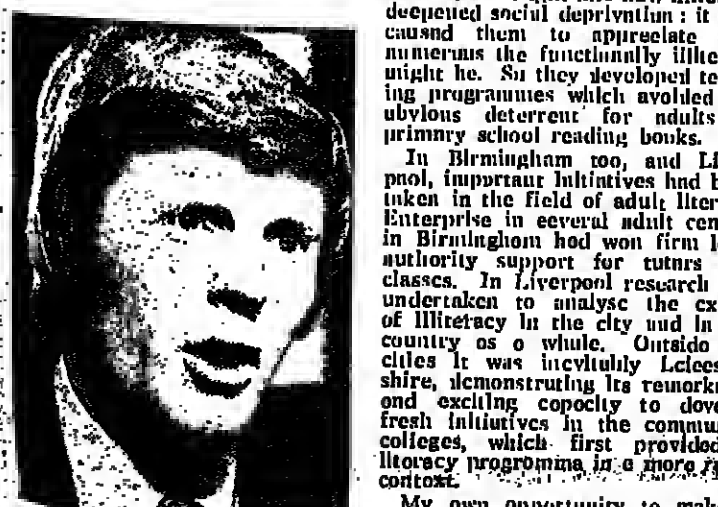
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Provision in the Gloucestershire Institute of Higher Education should be reduced to 500 places; teacher education in home economies at the Gloucestershire College should be discontinued; and St. Mary's and St. Paul's colleges should be amalgamated on St. Mary's site.

If these proposals are implemented teacher training places

Adult literacy: a success story



Bryan Davies

The Adult Literacy Movement had its origins primarily in the city. Much of the initial impetus for the campaign came from enthusiasts working for the British Association of Settlements, a London charity catering for the varied needs of the deprived in its area. Their work offered an insight into how literacy could be a powerful tool for social improvement; it also caused them to appreciate how numerous the functionally illiterate might be. So they developed teaching programmes which avoided the obvious danger of a primary school reading book being used in a more rural context.

In Birmingham too, and Liverpool, important initiatives had been taken in the field of adult literacy. Enterprise in several adult centres in Birmingham had won firm local authority support for tutors and classes. In Liverpool, research was undertaken to analyse the extent of illiteracy in the city and in the country as a whole. Outside the cities it was inevitably Leicester-shire, demonstrating its remarkable and exciting capacity to develop fresh initiatives in the community colleges, which first provided a literacy programme in a more rural context.

My own opportunity to make a minor contribution to this developing campaign was greatly enhanced by my election to Parliament in February, 1974. In addition to the general run of policy commitments and pledges contained in my election address was a more private obligation—a promise to my starer, who was organizing the Leicester-shire scheme, that I would press for a national initiative in this area of adult education.

I eagerly joined Chris Price, newly elected for Lewisham West, whose presence was an educational journalist had brought him into close contact with the literacy issue, in sponsoring the adult literacy resource centre supported by Government funds. The Bill proposed little more than a publicity play in that crowded and hectic session that was rightly deflected by every MP as an interlude between elections. Nevertheless, it put the issue on the parliamentary agenda.

Our friends at the British Associ-

Adult literacy: a success story

A meeting was convened at the House of Commons under the chairmanship of the Right to Read Campaigner, Lady Penelope Williams, all political parties were represented, and enthusiasts in the literacy field came from each of the main centres where schemes had been established. In only a matter of weeks, informed by much research in the DES, Gorty Fowler as Minister of State was inviting us to the Department to discuss how the literacy centre should transfer its work when its three-year period is complete.

The operation was essentially one of pump-priming. It was to establish a resource agency that could channel funds to local authorities for the creation of local schemes. Teaching was to be by volunteers, locally in a project which sought a one-to-one tutor-student relationship, and any professional expertise, whether in teaching or administration, would have to be provided from the general educational budget of the authorities. The agency was to provide teaching materials, advice and support to tutors and students, and to appoint and train professional administrators and organizers have proved largely unfulfilled.

In my own locality, our committee of volunteers was from the very first offered administrative support from the education office and in due course the appointment of a professional organizer. The scheme quickly took root with some 60 students and teachers in the first year but, as predicted, a massive stimulus has come from the BBC broadcast, *On the Move*.

Student and tutor numbers have tripled in the last year. The programmes are greatly appreciated not only for their technical skill but also for their immense morale-boosting qualities. Scrutinized as a popular flavouring time and in a style which furrows time and records with didacticism; they establish a general consciousness of concern for a widespread and genuine problem.

This is of the greatest significance for many adults who have to triumph over the stigma they believe to be associated with illiteracy. Moreover one-to-one tuition may be

Adult literacy: a success story

highly effective, yet it lacks the morale-sustaining qualities of education in a group. The television programmes reduce the isolation of individual study for those who have entered the scheme; more importantly they form a major basis of recruitment.

Despite the success of these national initiatives, the future of the literacy programme lies clearly in the further education service. Bill Devereux, Director of the Adult Literacy Resource Centre, is undoubtedly right when he argues that the centre should transfer its work when its three-year period is complete.

The centre has done a first-class job of channeling resources to the local authorities, vesting the initial proposals and giving advice on their development. It has established and developing teaching materials, it has largely fulfilled its major objectives of prodding local authorities into action and providing the resources to establish a body of trained practitioners in each area.

But the literacy scheme must now be able to take its place in the general educational service for adults. Although 100,000 students have come forward in the last three years, only the surface of the problem has been scratched: more than 10 times that number are in need of help. Of equal importance is the need to capitalize upon the interest which has been awakened in adult education by a wider audience. Large numbers of those who have recorded adult education as offering little relevance to them, who have looked upon its courses as catering primarily for those with off-beat priorities, keen upon their own individual good educational background, are becoming aware of the fact that evening classes can meet their needs.

The obstacles, of course, remain formidable. The current climate of retrenchment and increased fees is scarcely sympathetic to these new possibilities. Yet the further education service is nothing if not resilient. It should fight its corner, buoyed by the increasing signs that the community is becoming increasingly appreciative of the value of post-school education.

Adult literacy: a success story

Ministry have an important obligation in this field. The Government deserves every credit for its support for the Adult Literacy Movement. Nevertheless there is a danger that this support acts as a wholly inappropriate fig leaf to cover the Government's embarrassment over the Russian-style adult education. Yet the need, in some respects, the opportunity for action is great. The unemployment figures provide me dreadful indication of the numbers of our people with time on their hands; likewise early retirement patterns provide another area of need.

In the not too distant future, the fourth television channel could offer further opportunities for schemes modelled on adult literacy. The most obvious field is the need to cater for the needs of ethnic and cultural minorities. But there is also the fact that our welfare state annually wastes substantial sums to provide means of support for underprivileged groups.

The statistics of take-up on benefits, however, show the same distressing tendency for large numbers of those in need to fail to obtain what is their due. Of course, one solution is to make more benefits automatic, but an increasingly complex society demands an increasingly understanding on the part of its citizens.

Adult education needs to respond to the fact which escapes the Black Paper apologists—that the basic skill level necessary merely to live adequately in our society rises continuously. These problems are not resolvable within an educational framework which regards 11 years of compulsory education as the formal entitlement; nor one which expects sections of the population to survive on skills inculcated 20 or 30 years ago.

The literacy scheme identifies many of the successful components of a model for developing adult education. It would be a tragedy if the rest of us, as well as the committed students, failed to learn lessons from this scheme.

Bryan Davies is Labour MP for Enfield North.

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NOTICE BOARD

Chairs

Professor Jack Edward Baldwin, professor of chemistry at Massachusetts Institute of Technology, has been appointed to the Wayfield professorship of chemistry at Oxford University from October 1, 1978.

Dr John Lucas, reader in English at Nottingham University, has been

Appointments

Professor of physical chemistry at Leeds University, has recently been appointed a fellow.

Universities

Information officer: Mr William Lewis Bell. UWIST Reader: Dr A. D. Russell (pharmacy); Dr R. T. Waters (physics, electronics and electrical engineering); Senior Lecturer: Dr O. J. Sackler (applied biology); Dr H. C. Four (applied psychology); S. H. Cox (architecture); S. W. Stewart (law); T. J. Williams (mechanical engineering and engineering production); D. K. Luscina (pharmacy); Lecturer: R. A. Eariam (optometry).

General

British Association for Commercial and Industrial Education: The following honorary officers have been appointed for 1977-78: President: Professor Sir Charles Warner, pro-vice-chancellor and chairman of the council, the Open University; senior partner, Greener and Warner; Chairman of the BACIE Council: Mr A. Rendall, chairman and managing director of ESL, Bristol; Vice-chairman of the Council: Dr W. W. Easton, principal, Falkirk College of Technology; Honorary Treasurer: Mr H. A. Barrington, company training manager, Leaver Brothers; Royal Society: Professor Peter Gray,

appointed to Loughborough University's newly established chair in English. He will become head of the department of English and drama (at present a department within Loughborough College of Education) when the college and university amalgamate next August. Dr Louis Cohen, senior lecturer in the social psychology of education at Bradford University, has been appointed to a chair in education in the department of education at Loughborough University.

Dr A. R. Lipman, reader in the Welsh School of architecture, UWIST, has been appointed to a personal chair at UWIST.

Newham College, Cambridge University; Sir John Gray, FRS, secretary, Medical Research Council; Sir William Headerson, FRS, secretary, Agricultural Research Council; Dr M. W. Holdgate, Director-General of Research, Department of the Environment; Sir Peter Kent, FRS, chairman, Natural Sciences Research Council; Sir Jean Maddock, CB, OBE, FRS, chief scientist, Department of Industry; Dr E. W. Parkes, vice-chancellor, City University; Sir Charles Perry, FRS, chief scientist, Ministry of Agriculture, Fisheries and Food; Mr D. Robinson, chairman, Social Science Research Council; Professor T. R. E. Southwood, professor of zoology and applied entomology, University of London; Dr A. Spinks, director of research, Royal Society; Professor T. R. E. Southwood and Dr A. Spinks have been appointed as members of the Council of 1979 in succession to Sir Eric Smith and Dr W. R. Boun. Membership is now as follows: Professor Sir Frederick Stewart (ABRC chairman), regius professor of geology, University of Edinburgh; Sir Kenneth Berdell, KCB, head of the Central Policy Review Staff, Cabinet Office; Sir Kenneth Berdell, chief scientist, Department of Health and Social Security; Professor C. C. Booth, professor of medicine, Royal Postgraduate Medical School, St. Mary's Hospital; Sir Alan Cottrill, FRS, master, Jesus College, Cambridge University; Sir Frederick Dalrymple, FRS, chairman, University Grants Committee; Professor Sir Sam Edwards, FRS, chairman, Science Research Council; Mrs J. E. Floud, CBE, principal,

Department of Education and Science. Four additional deputy chairmen have been appointed to the research and publication committee: Dr Eric Armstrong, Mr Dennis Cox, Mr Sid Kessler and Dr Norman Ross. Their appointments are from March 1, 1977, for three years.

The Co-operative Union

Dr Robert Houston, at present lecturer in accounts in Liverpool University, has been appointed principal of the Co-operative College and Chief Education Officer of the Co-operative Union.

Forthcoming events

"The Overseas Student in London": a meeting of University and polytechnic administrators in the London Area (MUDA) will be held on May 4 at Thames Polytechnic, Woolwich. Details from the assistant registrar.

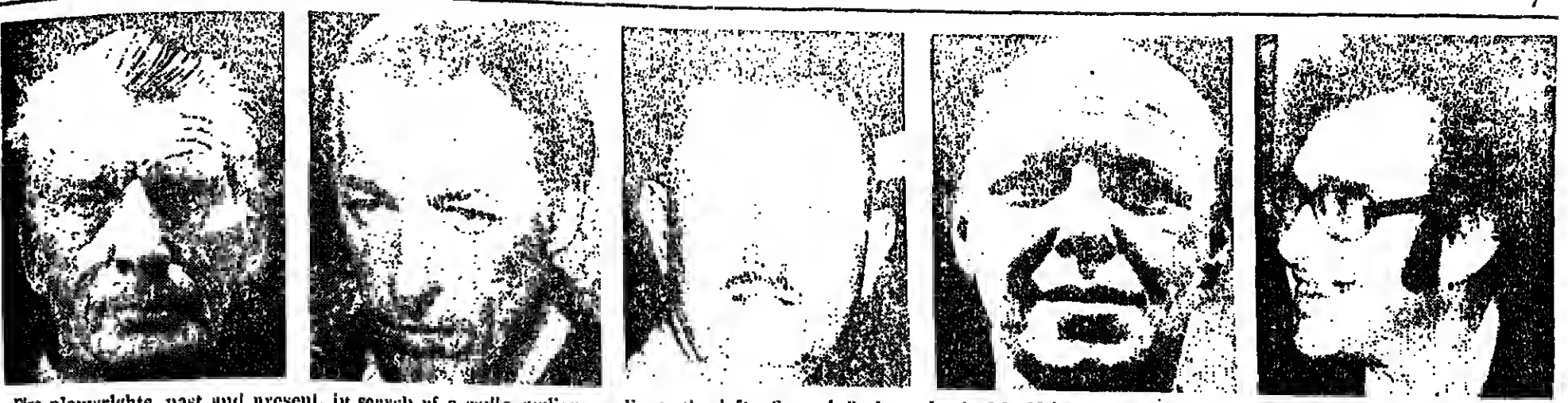
"The Vocational Preparation of Young People": a study conference will be held from May 8 to May 14 in the Further Education Staff College, Coombe Lodge, Blagdon, Bristol BS8 6BG. It aims to explore ways in which schools and colleges can expand provision for the 16 to 19 age group into kinds of activity which may be regarded as non-traditional. Applications to the Registrar and Clerk to the Governors at the above address.

"Coins and Archaeology": a weekend conference organized by the department of external studies at Oxford University will be held on May 6 & 7 at Rewley House, 3-7 Wellington Square, Oxford OX1 2JA. The conference is suitable for anyone interested in the application of numismatics to historical interpretation. Applications to the Course Secretary, Oxford University department for external studies, at the above address.

"Build Your Own Computer": is a one day conference on May 14 at the Institution of Electrical Engineers, IEE, Savoy Place, London WC2R 0EX. Information from Al Dimin, Online, Cleveland Road, Uxbridge, Middlesex.

"The Maintenance of Open Spaces": Module 1 - a series of three half-day courses for open spaces. The Management of Buildings, Maintenance, will be held from May 3-5 at the Polytechnic of Central London. This module is aimed at those responsible for open spaces. In association with building maintenance of separately. Fee: £75. Enquiries to Julia Kessel, Short Course Unit.

Noticeboard is compiled by Patricia Santinelli and Pauline Downs



Five playwrights, past and present, in search of a radio audience. From the left: Samuel Beckett, Louis MacNeire, Tyrone Guthrie, Giles Cooper, Urnith Pinter.

Literary treasures in radio's 'secret workshop'

The status of radio in this country was neatly summed up at a recent conference in Durham, with the slight of one speaker clutching a bundle of Lons MacNeire playscripts stamped "only copy: do not remove from Broadcasting House". The conference was originally intended for academics only, but the response in this country was so poor that its results had to be broadcast. In the end, there were 120 participants - a mixture of academics, BBC producers, writers, students and those working in radio abroad. Twelve countries were represented, including Germany, Yugoslavia, America and Switzerland.

The size of the foreign contingent was some indication of the different status of radio in other countries. In Germany, for instance, which sent 12 delegates, there is not the same restriction of copyright. Prof. Hans-Joachim Priessnitz, professor of English, Gesamthochschule Wuppertal, made the point that for every one in 100 radio scripts published here, one in eight were published in Germany.

The conference contributors tended to be from academics and not from the media. Mrs Francis Gray, a lecturer in English at Sheffield University, spoke on the plays of Giles Cooper and how his writing moves between the real and the fantastic.

Mr Peter Lewis, a lecturer in English in Durham, and one of the organizers of the conference, described the features which made Under Milkwood a work specifically valuable for bringing together those in the media, academics and writers. Normally there was little contact between them, he said.

One immediate spin-off from the conference on these lines was the commissioning of Radio Three of a lecture by Dr Bill Russell, lecturer in sociology at Reading, whose talk on "Sound drama before Marconi" made no credit and witty contribution to the conference. Mr Imison added that it was salutary for those in the BBC to hear specialists talking about radio from a completely different angle. "This view is not typical, but it is very important. It is very unusual for us to hear anyone outside our own discipline talking of it with knowledge," he said.

Frances Gibb

Open University programmes April 30 to May 6

Table listing various Open University courses and their dates, including 'People and organizations', 'The age of revolutions', 'The digital computer', etc.

Monday May 2

Table listing courses for Monday May 2, including 'Solid, liquid and gases', 'National income and economic policy', 'Social psychology', etc.

Why Scandinavia is an area worthy of academic attention

Why to increase competition between British universities offering Scandinavian studies should be actively explored... The report argues that for every one in 100 radio scripts published here, one in eight were published in Germany.

Shifts in Europe's economic balance: a giant oil rig being built in Norway.

The report, which has taken two years to prepare, states: "Within the British university system Scandinavian studies have always been, and doubtless will continue to be, of modest dimensions. It would be absurd to claim that this country needs a large annual production of graduate specialists in this particular field."

COURSES

STUDY AT HOME for a London University External DEGREE. Walsley Hall, the only correspondence college with full courses for London University External BA degrees, provides London instruction by highly qualified lecturers.

Sunday May 1

Table listing courses for Sunday May 1, including 'Arts foundation course', 'Science foundation course', 'Biological basis of behaviour', etc.

Tuesday May 3

Table listing courses for Tuesday May 3, including 'An introduction to materials', 'Biological basis of behaviour', 'The development of instruments', etc.

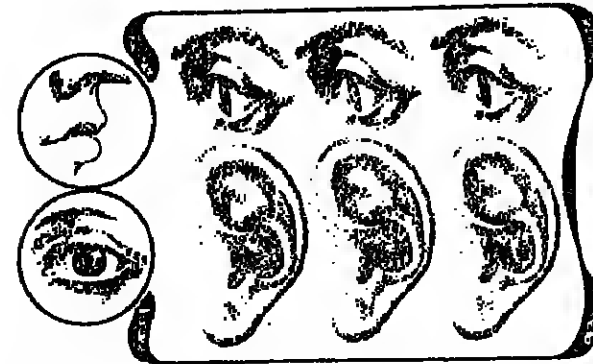
Wednesday May 4

Table listing courses for Wednesday May 4, including 'Systems behaviour', 'The digital computer', 'Alternative broadcast for North Scotland', etc.

Friday May 6

Table listing courses for Friday May 6, including 'War and society', 'The development of instruments', 'The development of instruments', etc.





How to train doctors and spare patients

by Fergus Gleeson

Simulation in medical education is not new. A number of medical school departments have been using models for many years, in particular anatomy departments where in certain cases anatomical detail can be more effectively displayed using a model.

The field of simulation, however, has broadened considerably in recent years with the introduction of newer methods and means as well as more technically advanced models. Although there is no clear definition of the concept of simulation in medical education, it is generally understood to be an attempt to imitate life or some aspect of reality in varying degrees.

There are a number of fairly well defined reasons why simulation is used in medicine. First, it offers an opportunity to examine a patient without discomfort or embarrassment to either the patient or the student. Secondly it allows students to be initially trained in new skills, and to gain a certain degree of competence in a particular skill before they come in contact with the real patient.

Thirdly, following such initial training, simulation allows students, or indeed already qualified doctors, an opportunity to practise skills not frequently required of certain groups of doctors but which when required can save life. One of the most frequently used simulators in this respect is a model of the head and neck that allows the insertion of an airway or endotracheal tube in an unconscious patient.

Finally, assessment, either self-assessment by the student himself or by the teacher, with immediate feedback, can be carried out using

simulation. This is a standard procedure used by airline companies and is the not too distant future as their fitness to continue to practice is now under discussion and various forms of medical audit are being reviewed.

Three-dimensional models have been used in anatomy departments for years. Recent improvements in the production materials used now allow the most lifelike of models to be produced. In some of these models even the fingerprints are included on the infusion arm model of obtaining blood from a vein in a patient's arm while the "skin" on this arm also represents a marked improvement.

A wide range of models of varying value are now available to medical schools, for example, eye, ear, nose, throat, breast, female pelvis and male pelvis for rectal examination. An added feature in many of these models is that a number of related abnormalities can be inserted into them. Such an option allows the teacher to assess students' examining techniques as well as their power of observation and diagnosis.

The reproduction of auditory stimuli such as recordings of actual heart sounds and breath sounds have been available for a number of years but have not been popular mainly because they offered no advantage over listening to the heart or lungs of a real patient.

Identifying such sounds can be extremely difficult for students because both types are heard when one places a stethoscope on the patient's chest. In addition a number of different heart sounds can be

heard when listening to the heart itself.

To get over this problem simulators are now available that allow you to listen to one sound only at a time and having heard it the others can be gradually faded in to give the composite sound.

Paper and pencil simulation is often referred to as patient management or simulated patients (PM). The student is initially given the written history of a patient which is then followed up by a series of branched problems designed so that he has to make decisions from a number of alternatives in each case. For example, requesting further information in the history of the patient or requesting a particular laboratory investigation.

In the format devised by McGuire and Solomon at the University of Illinois College of Medicine, the decision is made by erasing an option on the decision tree. Other methods of recording a decision are also available and further developments in this area can be expected.

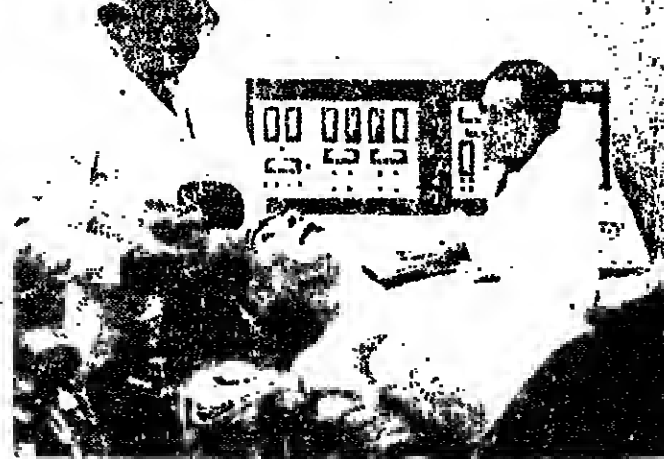
The computer has two roles in the field of simulation. First there is the extension of the paper and pencil patient management problem in which the computer is programmed to handle a PM involving decision making by the student.

Secondly, the computer is in the use of automated robots which are extensions of the simulation models already described. The original unit best-known is SIM 1, a computer-controlled simulated patient of manikin developed by Abrahamson and Donsen in the University of Southern California Medical School.

This simulated patient is the result of cooperation between the areas of medicine, education, engineering and computer science. The patient "looks like a living person and 'breathes' with its chest and abdomen, has carotid and temporal pulses, synchronized with an audible heart beat and can be ventilated by an anaesthetic bag and mask or through an endotracheal airway. It also responds appropriately to various anaesthetic gases and drugs and "dies" if treated inappropriately.

Further additional extras have been added to later models. However, the cost of such robots is prohibitive and consequently their availability is extremely limited.

The author is in the Department of Medical Education at the University of Dundee.



SIM 1: the computer-controlled simulated patient who "dies" if incorrectly treated.

Patient interviewing or simulated patients who can be used for a variety of purposes, but in some cases interested volunteers are used. Patients are particularly useful where it is necessary to gain experience in interviewing patients but where the use of simulated patients would be inappropriate. A variety of reasons such as a poor prognosis to a wife's husband has a fatal illness.

There is little evidence that patient interviewing or simulated patients is more or less effective than other teaching techniques. However, new uses for medical simulation and many doctors have found some aspects of the technique of use in their own teaching.

There are limitations to the use of simulated patients. However, the real life situation is being increasingly used in medical education particularly as more doctors become aware of its advantages.

The author is in the Department of Medical Education at the University of Dundee.

BRIEFING The British Library

United front faces problems of cost and conservation

by Patricia Santinelli

The creation of the British Library in 1973 effectively centralized the reference, lending and bibliographic services of the major UK libraries, as specified in the 1971 White Paper and the British Library Act 1972.

It brought together the British Museum Library, the National Reference Library of Science and Invention, the National Central Library which provided lending services for the humanities and social sciences, the National Lending Library for Science and Technology and the British National Bibliography.

The 1972 Act specified that the British Library should be a comprehensive collection of books, manuscripts, periodicals, films and other periodical matter whether printed or not.

The British Library is managed by a board headed by a part-time chairman and a full-time chief executive, who is also deputy chairman. There are three divisions: reference (which includes the Science Reference Library), lending and bibliographic services, plus a central administration and a research and development department.

To assure consultation with the users of the library, the board has created an advisory council and five advisory committees which serve the reference, lending, bibliographic and research and development areas. The committees have met to consider problems such as conservation, accommodation, security, re-arrangement of the collection, services, on-line computerized information acquisition policy, pricing policy, back-up libraries and long-term funding of information research.

The main problems facing the library at the moment are conservation, space and the use of microfilm to offer part of the solution. Both the reference and lending divisions are suffering from lack of space which in the case of the former is unlikely to be resolved until the mid-1980s and only very limited building starts on their new site at Euston in 1979.

Conservation is also a major problem for the reference division which has recently put £250,000 aside to deal with over one million volumes in a bad state of repair.



Reference from Asia to postage

The reference division of the British Library is mainly housed in the British Museum at Bloomsbury. The division consists of four departments: printed books, manuscripts, oriental manuscripts and the science reference library. The department of printed books is the largest of the four consisting of about 10 million items which it acquires at the rate of one million a year. It contains printed books and periodicals in all languages except those of Asia. This includes the early and rare books collection; the archival collection of British publications built up from the Copyright Act and the outland collection of foreign literature.

It also comprises the Official Publications of the Map, the News-papers and the Library Association libraries and important collections of music scores and postage stamps.

The Newspaper Library at Colindale contains newspapers published after 1800 from all countries and also British provincial papers published before that year.

The department of oriental manuscripts and printed books covers literature of the oriental world and North Africa containing 500,000 items; it is particularly rich in Hebrew, Medieval European, Arabic, Persian and Indo-Persian manuscripts. The Chinese library includes the Sino collection of more than 6,000 manuscripts and printed books. There is also an outstanding collection of Japanese book-printed books and manuscripts, antiquarian books and a large library of modern books from the East.

The functions of the reference division are to collect not only British books and important British manuscripts and papers, but also as much as possible of the world's important printed material and manuscripts of foreign origin in certain specialist fields. Since 1975 £1,155,989 has been spent on the purchase of these items.

Holding the library today total about 28 million items. These include books, parcels, microfilm reels, manuscripts, monographs and pamphlets, patent specifications and current serials. New acquisitions are in the region of two million a year.

The division then makes its material available to readers, two-thirds of whom are academics. A problem in providing this service is lack of space. Over half the books are in store at the Woolwich Arsenal and this sometimes results in long delays for users of the library. At the present rate of growth the library will by 1980 have more books at Woolwich than in central London.

Science and 20m patents

The Science Reference Library consists of the former National Library of Science and Invention and the Patent Office Library in Holborn. The Holborn branch contains books and journals on industry as well as the most comprehensive selection of patent specifications in the United Kingdom currently standing at 17 to 20 million.

The Bayswater branch of the Science Reference Library which is due to move to new premises in 1979, is particularly strong in the literature of life sciences, Slavonic and oriental languages, periodicals, books, pamphlets and abstract periodicals. Foreign material is obtained by purchase or exchange while English material is part of the copyright deposit.

The rationalization of material held by both branches means that each branch holds what they seek. For example, monographs and journals in certain branches of science previously split between the two branches have been transferred from Holborn to Bayswater. At the end of 1977 Holborn held physics, chemistry, engineering and associated technologies, industrial property, patents, trademarks, registered design and related law and technological trade literature.

The Bayswater branch will hold mathematics, geology, mineralogy, astronomy, life sciences and public health and medicine. There are also a number of Russian and Chinese materials which will be housed at Bayswater regardless of subject matter. Philosophy and the history of science are excluded from the library except in the technology and geography areas.

The primary purpose of the library is to make the wealth of scientific knowledge accessible—on a "pay as you go" basis whenever possible—in industry, research and development. Scientists, technologists and developers are the people who work with the library. The facilities are also available to information officers, teachers, librarians, abstractors and journalists.

Services in person or by telephone, the SRL will, by the end of 1979, provide a comprehensive and specialized selection of scientific and technological literature. Since 1973 there has been a steady increase in the number of enquiries. This is due, for example, to increased interest in technical literature and the fact that the Board of the British Library at Bayswater is strengthening their links with other patent libraries of the country and the city libraries of Liverpool, Birmingham and New-

Two buildings that support the country

The aim of the Lending Division in Boston Spa is to support the library system of the country by providing a loan and photocopying service. The division has a staff of 450 and a budget of £6.1m. It was created by combining the National Central Library (NCL) and the National Lending Library for Science and Technology (NLST).

The stock now includes 2.5 million volumes of books and 1.5 million documents in microform which are increasing at four million per annum. Last year 55,000 new volumes were acquired and the acquisition budget was £1.6m.

The collections are housed in two buildings, the latest of which, the Loughborough building, has only one storey, the shelving level. Additional to the new building, not yet completed until 1979 and, as a result, duplicate copies are being sifted rigorously and stored in crates in an old warehouse.

For catalogues without waste

The Bibliographic Services Division was established within the British Library in 1974. Its function is to provide centralized cataloguing and other bibliographic services related to the needs of the national library and the library and information community.

Mr R. E. Coward, director-general of the division, said that its aim was to integrate the BL's internal processing operations with its external services so that the products of its cataloguing, classification and indexing activities become a resource generally available to libraries and reduce wasteful duplication of cataloguing. This objective was increasingly being achieved through very advanced computer systems.

The nucleus of the division is the former British National Bibliography and it continues the BNB functions of producing a current listing of all British publications and developing a computer-based system for storing bibliographic information.

Also transferred to the division with the BNB in 1974 were the British Catalogue of Music, the British Education Index, "Books in English" (an experiment in ultra-microfilm publishing) and the British Union Catalogue for Periodicals (BUCCOP). The Copyright Receipt Office and the UK National Serials Data Centre have also been incorporated into the division.

Two buildings that support the country

The operation of the division has often been compared, and not always kindly by many librarians, to a factory. The layout involves a conveyor belt, chutes, trays and a system for recording and dating material. Filings of material is by alphabetical order of title and this had led to some odd sounding neighbours such as DNA synthesis next to "Dock Harbour and the Athlete".

The division receives a total of one and a half million requests a year or 10,000 per day including applications, a high percentage of which are for science material. About 92.5 per cent of these are satisfied, 83 per cent from stock and 9 per cent from back up libraries. The latter consist of 35 libraries such as the London School of Economics, and Cambridge and Oxford who hold highly specialized material not normally available on loan but who have a

fee paying arrangement with the BL to provide this material. There are approximately 12,000 titles at present and current intake is 47,500 titles, including over 3,000 Cyrillic titles, whilst a further 4,300 titles are on order.

The basic policy for serials is to collect very extensively irrespective of subject, language and country. There are approximately 12,000 titles at present and current intake is 47,500 titles, including over 3,000 Cyrillic titles, whilst a further 4,300 titles are on order.

The books policy is more selective. The aim is to acquire comprehensively all English language books but few foreign language texts as little new material appears in other languages which has not already been published in periodicals.

However exceptions do occur.

Two buildings that support the country

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Within the library the bibliographic services division has been responsible for providing a computerized catalogue of the British Museum general catalogue of printed books and its computerized publication subject index. Since 1975 United Kingdom and foreign books have been catalogued in machine-readable form and the first microform catalogues are now avail-

able in the reading room at Bloomsbury.

Nationally the division provides a service to the library community by publishing the BNB weekly list which is circulated to libraries all over the world. This task is facilitated by the copyright deposit.

The introduction of a Cataloguing in Publication (CIP) system designed to provide advance information, professionally compiled, of newly published books will have a double effect. First BNB will be more up to date thereby serving libraries who need advance information for purposes of acquisition, cataloguing and classification. Secondly, the Copyright Receipt Office will acquire an increased number of publications. It is anticipated that the system will cover some 80 per cent of the United Kingdom publications within the next three to four years.

All CIP entries will be fed into a system, acronym MARC, for machine-readable cataloguing through which the division makes its store of cataloguing data available to the library community. This national network was originally planned in three stages moving from a batch processing IBM system to a large on-line network with a new

British computer (ICL 2900 series) at the centre.

However, this plan has been altered because of demand from the library community for the development of a European network (EURONET) and a major forerun-ner on-line programme using an IBM and existing software has been introduced. Blease (The British Library Automated Information Service) will become operational this summer. United Kingdom libraries will be linked by on-line facilities and will have access to one million records. Libraries will also be able to order records from the files and add their own cataloguing data.

"So, instead of thinking of a national centre, feeding records and services into the community, the future pattern will be a two-way exercise," Mr Coward said. "We shall be as concerned to see that records are coming in from Manchester, Oxford and Cambridge, as sending records to them."

R and D gets triple role

The Research and Development Department took over most of the functions of the Office and Scientific and Technical Information (OSTI) which were transferred from the Department of Education and Science to the British Library in 1974.

The department promotes and supports research and development relating to library and information operations in all subject fields. When it became part of the British Library, R and D began to include some of the humanities subjects. Its work is directed to the benefit of the national library and information services as a whole and this end it can award research grants to outside bodies. In 1975-76 the R and D awarded £1,112,000 towards 56 projects. Another of its functions delegated by the DES is to assist in the attainment of national and international policy objectives.

Two of its main objectives are the promotion of reference and leading networks and the provision of BL information services wherever possible. "It has the triple role of identifying priorities or research, stimulating and supporting research and promoting application of results," said Mr John Gray, director of the department,

Outside eyes help us understand cloisters of the law

It is always hard to engender serious critical debate on the rate of professions in society. Members of those professions, relying on the mystique that surrounds their activities, will usually find critics from outside by claiming that they do not really understand what the profession does.

There are, however, a few signs that things might be changing. The old Frigate and Income Board took a number of sceptical looks at solicitors' remuneration. More

recently, the Manonelles Commission criticized certain restrictive practices, and the rules against advertising by solicitors. Currently, the Royal Commission on Legal Services is providing the opportunity for a fundamental re-appraisal of the work of the legal profession.

Despite these developments, it is not likely that radical revisions in professional attitudes and work patterns will occur unless the public at large becomes more informed about the relevant issues. Further-

more, it is necessary for critics within the profession, as well as those outside, to be given the chance to state their case.

All credit, therefore, must go to Keri Littla, producer at the BBC, and the education faculty of the Open University for the two-part film "Cloister" which is part of the "Education and Society" course "Schooling and Society". It came in a sequel to the course dealing with professionalism but has much wider relevance than mere course material and should be seen by anyone interested in the future development of the legal profession.

The film consists of a series of interviews with people representing different interests in the work of the Bar. The profession is defended by, among others, D. B. McNeill QC, chairman of the Professional Conduct Committee of the Bar Council; two heads of established chambers in the Temple; Mr Bachelor, former chairman, Barristers' Clerks Association; and two young barristers.

Their basic view is that nothing is wrong, and in so far as there are problems the Bar can sort them out. Lord Justice Scarman, president of the Senate of the Inns of Court, also broadly defends the profession, but does recognize that it is under some pressure and that some basic changes, particularly in legal education, are needed.

More direct criticism is contained in the contributions from Lord Gifford, head of "Alternative Chambers", recently set up outside the confines of the Temple, by one of the barristers in any case, and by Professor Michael Zander, from the London School of Economics.

By means of careful editing and film cross-cutting, a range of opposing views about the work of the Bar are presented, but in a way which is largely irrelevant if educational qualifications are not the only criterion for being admitted to the Bar.

work in the fields of law and of the Rent Acts. Some considerable doubts are cast about the purely internal procedures for disciplining members of the Bar.

Some discussion about the wider question of what the role of the legal profession is contained in a challenging remarks made by Justice Scarman. He states that "the law is to settle disputes and to uphold public order."

At the end of the film develops this point as he criticizes what he sees as the limits within which lawyers operate. He remarks that "the law is always been an awkward and uneasy fit with the society it serves, but goes on to say that the Bar, but goes on to say that those who deny their own basic assumptions are not tolerated."

Many other topics are raised for discussion. Criticisms of the narrowness of selection of members of the Bar—too few from the working classes and too few women—are set alongside broad comments on the needs of "established" chambers of how they choose new pupils and tenants. They make it quite clear that family background and connections are still vital factors affecting selection.

Lord Justice Scarman claims that state education now ensures that anyone who wants to can get the required educational qualifications to go on to the Bar. This may be right, though many would strongly deny the claim, but is in any case largely irrelevant if educational qualifications are not the only criterion for being admitted to the Bar.

There are also interesting divergencies of opinion about the role of barristers' clerks. There is criticism of the narrowness of the traditional legal education, and of the inability of most barristers to do

of opinion on the question: "Should a barrister's primo responsibility be to the court or to his client?" D. B. McNeill puts the traditional case that it should be to the court. Barristers practise under licence from the judges, he says, therefore they must primarily support the court. Lord Gifford rejects this for the client should come first. Only thus can a client have trust and confidence in his advocates.

Near the end of Part Two, however, this latimacy is criticised by Lord Gifford and his colleague, who argue that this often causes clients great unease.

A more fundamental criticism is that the effect of cutting barristers and judges off from the lives of ordinary people. This is said to be unacceptable because it removes them from contact with the very people most affected by their advocacy and judgments. Therefore a specific objective of the "Alternative Chambers" is to develop more direct contact with their clients.

Part One of the film has been shown, Part Two will be shown on May 8 and repeated on May 15. The author is lecturer in the London School of Economics.

Advertisement for Statistics, Computers and Operational Research. Includes contact information for the London School of Economics.

British Film Institute advertisement for Film Study Summer School 1977. Focuses on "POLITICS AND FORM" at the University of Stirling, Scotland, from July 30 to August 13, 1977.

Handwritten text: "السلامة" (Al-Salamah)



NORTH AMERICAN NEWS

MICHAEL BINYON reports from Washington

The Times Higher Education Supplement (London) Room 541 National Press Building Washington DC Tel: (202) 638 6765

Graduates continue to have economic edge

Despite the questions raised recently about the economic value of a degree, a recent study by the Conference Board found that the economic edge college graduates have over their counterparts who did not go to university has been maintained in recent years, but their employment and income prospects are still above average.

The analysis, by Dr Leonard Loch, found that people holding a degree are less likely to be unemployed than any other group in the labour force, and are three times less likely to become unemployed than the labour force as a whole.

The main reason for this is that their jobs are in occupations which react to recession by growing more slowly rather than by reducing their employment level. Between 1974 and 1975, for example, non-college employment fell by 1.8 million, while employment in professional and technical fields—which provide jobs for most college graduates—rose by more than 400,000.

Graduates also continue to have a higher average income than those who completed their education at school. Though the income gap has narrowed, it is still imposing: in 1974 college men over 25 made 36 per cent more than their high school counterparts—a difference of \$4,500. And male university graduates over 25 and 34, whose income advantage over non-graduate peers is slighter, still had incomes averaging \$2,000 more. In addition, graduates are employed in positions involving more generous fringe benefits.

Income progression is also greater for men with a degree. In 1974 the

Our correspondent visits a 'Renaissance college' that concentrates its learning almost exclusively on reading

In the beginning was the word

Thirty years ago there was a revolution in one of America's oldest colleges, and the changes are still being felt today in liberal arts colleges all over the country. At St John's College, Annapolis, a picturesque liberal arts college founded in 1776, a radical change in its curriculum and teaching methods has been implemented.

But within the formal setting, the course is as radical as it was in 1947. The abolition of all academic divisions means that teaching at St John's is unlike teaching anywhere else. Tutors do not depend for advancement on publications or research, and, apart from salary increases, they cannot climb any academic ladder.

Through each contact with the student, also wearing a gown, is formally presented to them, for an hour, a question on, for example, Lincoln's Theory of National Right and the Greatest Good.

It was hardly to be expected that the revolution of the counter-revolution would be brought in from outside. But it was, and it was brought in by a young man, a graduate of the college, who wanted to see his classical tradition.

It was a gamble, but it was a gamble that probably paid off. The college is so small (200 students, 20 teachers) that the New Program, the basis for a liberal arts education, is not so theoretical as it seems. It is very few blocks at all, there have been here, St John's, a second-century school in Santa Fe, New Mexico, which also runs a small college, and St John's, a second-century school in Santa Fe, New Mexico, which also runs a small college.

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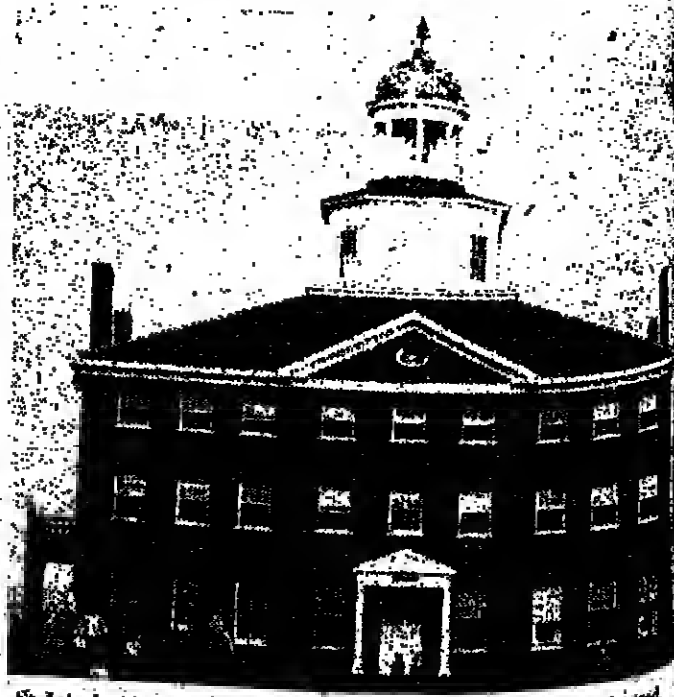
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St John's 140 years on, and the curriculum is virtually unchanged

Italy

Reform plans bring new riots

Tension in Italian universities was at a new high at the weekend as a policeman was killed in clashes with students protesting at the government's long-proposed Bill for university reform.

Students who had occupied four faculties at Rome University, partly in protest against the Bill, were finally driven out by police.

In Bologna, also the scene of student violence last month, students occupied four faculties while local authorities warned that they may have to be thrown out.

The Bill, proposed for three years and finally speeded up in response to the recent student revolt, is the latest in a long series of attempts at university reform presented over the years as the universities have steadily deteriorated.

All, except for urgent stop-gap measures approved in 1973, have failed, largely because of strong disagreements among politicians.

The present Bill is also controversial: it has been criticized by the left wing and by academic circles as well as by the students. But it may have more chance of success: the near-paralysis of the uni-

versities and the explosive mood among the students may induce the politicians to strive for some kind of agreement.

Under the Bill two new forms of university qualification are to be introduced. They are the diploma, a lower-level degree available after a short period of study—probably about two years—and the research doctorate. The latter would be awarded after four years' post-graduate research and is restricted to those intending to embark on a university teaching career.

In addition to the traditional Italian degree, the new diploma would be awarded after four or five year courses. The Bill also introduces degrees in physical education, at present unknown in Italy.

The present system of one-chair faculties is replaced by a British-style departmental system. Professors would be obliged to pool libraries, facilities and equipment in a coordinated teaching activity.

There would be two types of professors, the 'ordinaries' and associate professors. The latter category would be composed largely of the present short-term professors and university assistants.

The Bill also provides for the creation of a National University Council which would of professors, students and non-teaching staff but also experts on economic planning, research and education.

France

Grandes écoles set to take more technologists

from Guy Neave

Changes in the entry conditions to the grandes écoles, France's top institutes of higher education, are to be introduced from October 1978, M René Haby, Minister of Education, has announced.

The reform, which promises to be one of the most significant since the war, is part of a long-term strategy designed to improve the standing of technological studies in French secondary schools and in higher education generally.

From October, 1978, school leavers passing the baccalauréat in either technical or applied sciences will be allowed to sit the stiff competitive examination that can lead to a place at one of 67 elite establishments, including the Ecole des Hautes Etudes Commerciales and the Ecole des Ponts et Chaussées.

It is expected that similar changes will be introduced shortly to the technical and the Ecole Nationale Supérieure d'Administration.

Until now the grandes écoles have insisted on a broad general education, including both sciences and mathematics. Some, however, like the top business school, the Ecole des Hautes Etudes Commerciales, have demanded additional qualifications in the form of economics.

Effectively, this debarred the social technologist even from entering the examination. Only able to sit the examination in only one of those wishing to enter the top layer of the French higher education system. Two years' additional work after the baccalauréat is placed in special third and fourth year sixth forms, known as Classes Préparatoires, attached to high-prestige lycées.

A second log to M. Haby's strategy is to increase the number of "super sixth forms", to cope with the expected rapid growth of school leavers into the elite classes. Some 67 additional classes prepa-

South Africa

Government again bars Coloureds

from Louis Holtz

The government has turned down a recommendation by a government-appointed commission that Coloured students, both undergraduates and graduates, should be admitted to all universities in the country and should not be confined, for the most part, to the segregated University of the Western Cape.

The recommendation, one of many hundreds contained in the report of the Commission set up some two years ago to inquire into the conditions and future of the Coloured population, was made at the instance of representatives of the Coloured community and supported by members of the commission, including the chairman, Professor Erik Thoron, drawn from "White" universities.

In a White Paper the government said it could not accept the recommendation because it would be detrimental to the growth and development of the Coloured people, and would be wrong to allow Coloured students freely to have access to faculties at other universities when these were provided at their own university.

At the same time the government accepted the commission's view that the selection of students for admission should be left to the universities themselves.

India

New administration takes close look at campuses

from A. S. Abraham

The new federal Education Minister, Dr Pratap Chandra Chunder, has called for a review of all the instructions issued by the previous Congress government during the 20 months of Emergency rule. The thrust of these instructions was to arrest academic life and activity throughout the country.

Dr Chunder said he was writing to the provincial governments asking them to re-examine all cases of "political victimization" that may have taken place and which involved the dismissal or demotion of staff.

Dr Chunder announced the revocation of restrictions imposed by the previous government on elections to student unions in universities. These would now be held in the normal way.

He said that he had asked officials of his ministry to prepare confidential notes on the "managers" of educational institutions, including vice-chancellors. If the complaints, including financial irregularities, were found to be valid, "serious steps" would be taken.

Sweden

Teaching jobs hold firm

from Mike Duckenfield

A lack of teaching jobs—one of the main reasons for high unemployment among Norwegian arts graduates—has not yet affected Sweden. Recent figures from the Central Statistical Bureau show that as many as 81 per cent of male and 44 per cent of female graduates find jobs in education.

However, almost one in six of those with teaching jobs six months after graduation, Of these, 40 per cent became local government employees, 24 per cent worked for the state and the remaining 36 per cent had jobs in the private sector. In Denmark graduate unemployment was increased to 8 per cent during the past year. For every three jobs at the end of 1975 there were four a year later. Despite approved prospects for engineers, "survivors" doctors and dentists, the situation for other groups worsened. The number of jobless comprehensive school teachers increased threefold.

Fay Haussman on the questions being asked at a key post-graduate centre in the Amazon



Sugar cane cutting in Brazil.

Telling the research wood from the trees

The Centre of Postgraduate Amazonian Studies (NAEA), at the Federal University of Pará in Belém, has set itself two tasks: to cut a solid scientific research through the lush mythology enshrouding Brazilian Amazonia and to train experts capable of tackling the problems of a rapidly changing tropical region.

How well is Amazonian man adapted to his environment? How successful has spontaneous settlement in Brazilian Amazonia been in the past? What are the stinging blows of modernisation in Amazonia? How far is the study of African regional development relevant to the problems of Amazonian development? Questions such as these are today being raised and investigated at NAEA.

NAEA started working in February, 1963, with an international programme in regional development training open to qualified college graduates from Brazil, from five other Latin American countries (Venezuela, Colombia, Ecuador, Peru and Bolivia) and from Africa. Its basic goal is the training of personnel able to identify, analyse, interpret and help solve the most serious problems of the Amazonian region, particularly in their socio-economic and technical aspects.

In other words, NAEA aims to produce the expert manpower whose lack has so far thwarted all attempts at rational regional development.

NAEA's creation was the direct outgrowth of Brazilian government efforts to integrate the enormous Amazon region, the legendary "green hell" of tropical forest, fauna and flora surrounding the giant Amazon river system, into the rest of the nation.

Amazonia is nine times as large as France; it covers nearly 60 per cent of a Brazil's national territory but has only 10 per cent of its population, producing less than 4 per cent of the national product.

The ambitious Trans Amazonian road-building programme, which was undertaken in 1970 and has by now been largely completed, has been criticized chiefly because it is little was known of the area suddenly opened up by the new roads. For concerned Brazilians, thorough and lengthy scientific studies should have preceded, and perhaps in part accompanied, the building of the roads and the settlement of Amazonian lands.

But, just as the science of thermodynamics is a product of the steam engine, and not vice-versa, most of the multi-faceted studies of Amazonian phenomena today undertaken in Brazil are a product of the new roads.

NAEA's training programme envisages four study areas and offers a choice of 15 disciplines. A student spends 20 hours a week on group research in the "research laboratory" where he works on a specific research project with other students under the guidance of a specialist in the field.

On completion of the required credits the student graduates as a "Specialist in Regional Development" and can go on to finish his studies for a full Master's degree in development planning.

This year NAEA has started offering also the full Master's degree programme, with three options for specialisation in the development planning area: economic aspects, social aspects and physical-spatial aspects.

Various government agencies, both Federal and State, as well as

the Ford Foundation, contribute to the funding of NAEA's programme and to the full scholarships awarded to its students. Scholarships for foreign students are given by Brazil's Ministry of Foreign Affairs, which also selects suitable candidates.

NAEA has several features which make it remarkable in Brazilian context. There is its roster of professors which combines Brazilians with Master's or PhD degrees from other countries, foreign professors from Colombia, Bolivia, Belgium and the United States, and a group of renowned specialists from Brazil's southern universities who work as "visiting professors." Within the next four years, 20 of NAEA's professors will go to Europe and America for doctoral studies.

Another unusual feature is NAEA's admission criteria. As is usual, candidates are selected on the basis of their ability and the relevance of the study-plans they submit for NAEA's approval. Candidates must be college graduates in socio-economic or technical fields with practical experience in their professions. The most important criterion, however, is motivation.

A candidate must be highly motivated to continue working in activities related to Amazonian development.

Equally remarkable is the fact that NAEA is Brazil's first—and, so far, only—Amazonian research institute to operate as part of a university, and at the postgraduate level.

Nancy Stopen, a graduate of Oxford University, says in her book Beginnings of Brazilian Science that until the end of the nineteenth century Brazil had no institutes or schools able to train research scientists in a systematic fashion. In Amazonia, for example, most of the research of the time was done by foreign explorers and naturalists among whom Charles Darwin, Henry H. Bates, Alfred Russel Wallace and Richard Spruce have been prominent.

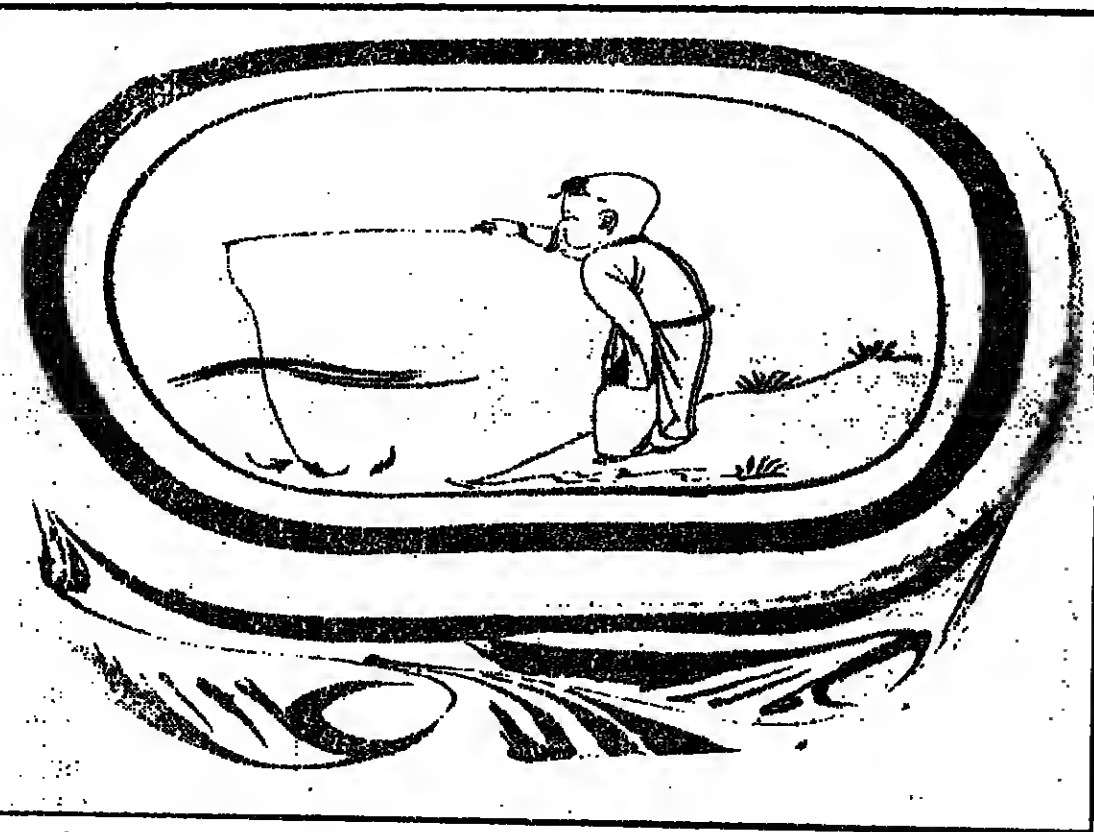
But even so, the development of research in Brazil antedates the creation of universities. As a result Brazilian research, most of it "applied" or problem oriented, has remained the nearly exclusive domain of scientific institutes not linked to any university.

Brazilian Amazonia today has a handful of specifically tropical research institutes. The oldest and most prestigious is the Gould Museum in Belém which was founded by the Swiss naturalist Estanislau de Sousa Reis. Research at the Gould Museum focuses on natural sciences, ethnology, anthropology and archaeology.

A more recent but by now perhaps equally well known institute is the National Institute for Amazonian Research, INPA, in Manaus, with its work in environmental sciences, tropical botany, forest research, tropical pathology and phytochemistry.

INPA's intensive Training Programme for Work in the Amazon antedates that of NAEA by three years. INPA's programme lasts six months and combines the study of Amazonian ecology and tropical hygiene with a solid systemic groundwork in statistics/research methodology and general laboratory techniques.

BOOKS



Stoneware pillow painted with a picture of a boy fishing on the top, and broad floral scrolls on the sides. The scroll with front Art and Archaeology in China by Edmund Capon, published by MIT Press at £15.00.

What to do in Bristol

Leisure and the Changing City, 1670-1914 by H. E. Mellor. Routledge & Kegan Paul. £7.50. ISBN 0 7100 6430 7

The changing city of the title is Bristol, but it is only in a strictly limited sense that this book is concerned with the history of leisure in that city. That becomes obvious as soon as one asks with what matters a book would have to deal to do justice to that theme.

Since leisure is the time spent in not working (and, according to Dr Mellor, also in not sleeping) it must necessarily be considered in relation to work. Patterns of work differed significantly between different classes, sexes, ages and marital conditions. In many cases leisure was and is what state of mind and body it could be enjoyed depends in a large extent on the leisure facilities available. Moreover, leisure is a concept in which the element of time is crucial. We need to ask not merely how much leisure was available to any group, but when.

Neither of these considerations were prominently in mind at all in Helen Mellor's book. Despite its title and some introductory and concluding comments, it belongs rather to a different and older kind of history. It is concerned with the provision of public services and the facilities and with the aims of those who provided them. Not the leisure but the cultural provision of Bristol form the subject of this book.

Any discussion of cultural provision immediately poses two sets of questions. What was provided and how? To what notion of culture did it correspond? Dr Mellor sets out to answer the second and more ambitious of these, as well as the first, and it is this that provides the most interesting aspect of the book. She argues that around 1870 the social and economic elite of Bristol were converted to a belief that she calls Liberal Culture. This label describes the view, expounded by Matthew Arnold, that literature, art and music were able to transcend the divisions characteristic of economic life, and to provide men with the experience of genuine community. The local experiment of the Liberal Arts Club, which was founded by the poet, and the dissenting churches, who ministered to the privileged inhabitants of Clifton or presided over the public school education of their sons, Dr Mellor is herself so strongly aware of the inadequacy of this faith that she is content to proclaim that the work inspired by it had reached the end of the road. It comes as a surprise to her to find it still flourishing in a modified form a few pages later. The modifications of that view of culture in the face of experience is one of the great themes of her book.

In a separate chapter the book confronts the issues raised by the provision of sports facilities and the role of sport as a popular leisure pursuit. The terms of reference here are not Liberal Culture as previously described, but the implied antithesis with popular secularized

leisure for the masses is not clearly discernible. It is a feature of the book that it treats the provision of leisure facilities as primarily the task of philanthropy or of municipal authority. The close links between these two and their overlapping spheres are well explored, and in addition we are reminded that the world of working-class associations and that of Liberal philanthropy had many aims in common. But the role of commercial provision is not subjected to the same scrutiny. What could well have been the relationship between the four principal sources of provision and the competition between their respective aims in a period of changing incomes and work-patterns emerges only in a tentative and tantalizing possibility that is not sustained. Those readers who like to be taken firmly by the hand and guided near a carefully explored terrain will find that the central chapters introduce to a fascinating world of Bristol workers' politicians, to libraries and museums deliberately designed as civic palaces, to the inspiration that nineteenth-century Englishmen derived from Renaissance cities and to the world of strenuous philanthropy. Those who like to let their minds wander down the turnings of an author did not take, who enjoy learned references to the sociology of sport and the psychology of relaxation, will revel in the other sections of the book. Here is a work that caters for both tastes.

E. P. Hennock

Planned by divine providence

Discourse on Universal History by Jacques-Benigne Bossuet, edited by George R. G. Taylor. University of Chicago Press, £17.00. ISBN 0 226 06708 4

The protection of the chosen Jewish people throughout their turbulent Old Testament history, their average punishment for disobeying the Incarnation and the fulfilment of the ancient prophecies, the spectacular rise and fall of Babylon's empire who did not know or who despised the true God, the message of Christ and the establishment of his everlasting dominion through the church of Rome—these were the subjects which Bossuet vividly described for the heir to Louis XIV whose education as a God-fearing prince had been entrusted to him.

This latest addition to Leonard Krieger's Classical European Historians series is therefore at least as much a work of theological exegesis as of history, for when

profane and religious sources conflict it was the scriptural authority which Bossuet preferred, a sense of providence which was already being questioned by post-Tridentine Catholic writers. He was thus one of the last to have political education and observation of revealed religion at a time when new philosophical and scientific, rational and empirical, theories of good government were emerging. Even in his account of the decay of the Roman Empire, as well as the human weakness and ambitions of the nation, he is seen as the tools of divine Providence, in whose overall plan every historical event had a specific place.

As well as a princely textbook, the Discourse clearly reveals the deficiencies in the government of Louis XIV himself, because Bossuet, although a champion of absolute monarchy, insisted that royal power be used with moral responsibility, conforming to and maintaining the true faith, stamping out religious dissent, furthering justice and indi-

vidual liberty, and showing a patriarchal concern for the interests of the subject population. Conquerors could be condoned only if they respected the traditions of the people they held in subjugation. This new edition has been well translated, so that the power of Bossuet's convictions and the force of his arguments are compellingly clear. Professor Ranum's useful introduction puts his work in its historical and intellectual context, but it is at times unsympathetic to the author's declared aims, a little heavy-handed in its elucidation of biblical text and the Bourbon present, and it contains one serious and repeated mistake—that the book was a reaction to court life at Versailles, "the epicure of French political culture", when, of course, that palace became the permanent seat of the court only in 1682, a year after the Discourse was published and even longer after its composition.

Roger Mettam

Slave culture

The Black Family in Slavery and Freedom, 1750-1925 by Herbert G. Gutman. Basil Blackwell, £10.00. ISBN 0 631 17650 0

In 1965 the publication of Daniel Patrick Moynihan's study of the Negro family fanned a scholarly controversy which has reverberated in the present day. While acknowledging the dire effects of high unemployment and migration to the northern cities, Moynihan drew attention to the heritage of the past. He accepted old beliefs about the unique savagery of North American slavery and its disruptive effect on the black family, detailing the modern consequences of the matrilineal family in black communities, with women often constituting the main wage-earners even if men were present in the household. One cure for the resulting "jangle of psychology", Moynihan believed, was a national effort to strengthen the black family.

Such propositions clearly underestimated the positive side of ghetto life and the achievements of a whole variety of self-help activities undertaken by blacks themselves, while government programmes to create new jobs and the educational opportunities for them would more likely help city dwellers to escape ghetto conditions. Moreover, in much writing on the black family there has been a tendency to obscure the importance of a stable black extended family system and to assume that all female-headed households were victims, stunted by illegitimate children and unable to cope.

In the course of the debate on Moynihan it soon became apparent that comparative studies over time of the family patterns of a number of different ethnic groups in America were badly needed, and that, despite the enormous literature on slavery, the nature of slave culture remained in doubt, even for the nineteenth century, while its social and cultural phases had been distinctly marked.

Since 1965 important scholarship has appeared in both areas, but especially in slave society. Quantitative analyses have suggested that the slave system which emerged in North America, however cruel and unjust, permitted a rapid rise and a highly organized slave population and in highly profitable agriculture, in which skilled black labourers and overseers were essential. Within this economic framework, as research on slave music, song and beliefs, and resistance to Eugene Genovese's concept of Southern slave society as a unique form of patriarchy, Gutman also explores his findings about many of the characteristics of slave culture though not about their manner of development.

The difficult source material and disconcerting movements backward and forward in time do not make this a book which can be read with such a subject in its title. It is a work which is obliged to take it outside the home and their children from enforced apprenticeship to whites.

It was from these two points—a controversy about black culture in the 1960s and findings about black emancipation a century earlier—that Herbert Gutman began the work which after some 10 years has resulted in *The Black Family in Slavery and Freedom, 1750-1925*.

Using a vast array of statistical as well as literary sources, Professor Gutman demonstrates that many of the slaves did not live in the huddled hovels and that the diverse social circumstances of marriages often endured for many years. The original and impressive quantitative evidence does not swamp the book, though it is not published and sometimes rather laborious. Much time is spent on critical static models of the slave master relationship, which focus on slave treatment and master control. Slave culture is presented here as resilient and adaptive, shaped by independent black attitudes and beliefs which slaveholders and abolitionists alike—though in different degrees—failed to see or pretend.

Marriages not solemnized in churches, for example, were recognized in a variety of ways, including the common stick ritual. Practices of intercourse and sexual congress did not indicate the absence of a moral code, as contemporaries asserted, but rather a distinctive black code. Marriage usually involved pregnancy, although not all women were rejected owners' marriages. Many were expected to be faithful and wedlock. There is ample evidence of the protectiveness of black families and the opposition of black women to forced white attempts during and after slavery. White slave owners encouraged slave marriage, it seems that the institution flourished regardless of their presence, with slaves marrying out, as their children after family rejection, and some adopting surnames, and ending protective kinship as well as inter-tribal attachments that were their own. Family activities, such as flight or rebellion, occurred in means of slave self-assertion and also as migration, which broke up families and shattered kin networks, ironically served to spread this Afro-American culture throughout the South.

One part of the book's concern was to understand the nature of the slave system in the United States. Despite Gutman's attachment to the notion of a developing black culture, he is flustered by inadequate evidence for the eighteenth century and especially on African life through which a fascinating re-creation of the nation of black "creoles" in the present are the first rather than the last words of migration to Northern cities. It is often surprising to find that Eugene Genovese's concept of Southern slave society as a unique form of patriarchy, Gutman also explores his findings about many of the characteristics of slave culture though not about their manner of development.

The difficult source material and disconcerting movements backward and forward in time do not make this a book which can be read with such a subject in its title. It is a work which is obliged to take it outside the home and their children from enforced apprenticeship to whites.

Christine Bolt

Reviewers

Peter Abel is professor of sociology at the University of Birmingham; Christine Bolt is senior lecturer in History at the University of Kent; Paul Barrow, author of *Macroeconomic Theory*, is senior lecturer in economics at the University of York;

John Bull is senior lecturer in economic history at the University of Strathclyde;

Jollis Gould is professor of sociology at the University of Nottingham;

Et. P. Hennock, author of *Fit and Proper Persons: Ideal and Reality in Nineteenth Century Urban Gov-*

ernment, is professor of history at the University of Liverpool; Roger Mellis lectures in History at Queen Mary College London; Alan J. Nicholls, fellow of Anthony's College Oxford, is author of *Weimar and the Rise of Hitler*; Edward Royle is lecturer in history at the University of York;

Melcolm Swyer, co-author of *Business, Is to the Department of Political Economy at the University of Cambridge;*

A. C. Spearling, fellow of Queens College Cambridge, is co-editor of *Poetry of the Age of Chaucer*;

M. J. C. Surrey is editor of the *National Institute Economic Review*.

Classified Advertisements

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Colleges and Departments of Art Administration Overseas Government Industry Adult Education Librarians General Vacancies

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Universities



Applications are invited for the following posts for which applications close on the dates shown. SALARIES (unless otherwise stated) are as follows: Professor, \$20,587; Senior Lecturer, \$18,458; Research Fellow, \$13,850-\$18,209; Senior Lecturer, \$18,458; Lecturer, \$14,147-\$18,209. Further details, conditions of appointment for each post, method of application and application form, where applicable, may be obtained from the Association of Commonwealth Universities (Anglo-18 Gordon Square, London WC1H 0PF.

Australian National University
John Curtin School of Medical Research

the financial support of the Australian Government to undertake and sponsor research in selected areas of social science in Australia. The Director should have an understanding of Australian society and of the various systems which affect its development. He will be expected to provide leadership in the planning and direction of the Centre's research programme and to develop and maintain contacts with other research centres from a wide range of disciplines and organizations. Applicants should have superior qualifications and relevant research experience in the social sciences as well as expertise in the administration of research programmes. Salaries will be at the professional level. 20th May, 1977.

Australian National University
John Curtin School of Medical Research

RESEARCH FELLOW DEPARTMENT OF PHYSICAL BIOCHEMISTRY

Applications should be received in the office of the Director in the first 10 days of the year. The first 10 days of the year. The first 10 days of the year. The first 10 days of the year.

University of Sydney
LECTURER IN RELIGIOUS STUDIES

James Cook University of North Queensland
LECTURER/SENIOR LECTURER IN EDUCATION (PSYCHOLOGY)

Research School of Physical Chemistry
SENIOR RESEARCH FELLOW DIRECTOR'S UNIT

University of New South Wales, Sydney
DIRECTOR OF THE SOCIAL WELFARE RESEARCH CENTRE

University of New South Wales, Sydney
DIRECTOR OF THE SOCIAL WELFARE RESEARCH CENTRE

University of New South Wales, Sydney
DIRECTOR OF THE SOCIAL WELFARE RESEARCH CENTRE

University of New South Wales, Sydney
DIRECTOR OF THE SOCIAL WELFARE RESEARCH CENTRE

OVERSEAS TEACHING POSTS

Specialist in the teaching of English as a Foreign Language (PAKISTAN)

People's Open University, Islamabad
Candidates should be UK citizens, possess an MA in Applied Linguistics and have considerable experience in TEFL overseas and in Matriculation preparation. Prior involvement in one of radio and television as a medium of instruction is an advantage. Salary in excess of present emoluments. Benefits: Overseas allowances; education allowances; free accommodation; medical scheme. Two-year contract. 75 UO 52

15 Instructors in English for Special Purposes (KUWAIT)

English Language Centre, University of Kuwait
English or honours degree and an MA or Diploma in TEFL or Applied Linguistics plus at least three years' TEFL experience for MA candidates and five years' for Diploma candidates. Salary £7468-£8064 per local tax free. Benefits: free furnished accommodation; electricity and water; allowances for children, transport and high cost of living. Two-month annual passage-paid home leave. One year renewable contract. 77 AU 22-38

Return fares are paid, local contracts are guaranteed by the British Council.
Please write briefly stating qualifications and length of appropriate service, quoting relevant references number and title of post for further details and application form to The British Council (Appointments), 65 Doves Street, London W1Y 2AA.



University of Cape Town
DEPUTY PRINCIPAL (PLANNING)

The Council of the University of Cape Town has established a new executive post, that of Deputy Principal (Planning).

Applications from interested persons are invited. Nominations from others of suitably qualified persons who may be interested are also invited. The main responsibilities of the Deputy Principal (Planning) will be:

(a) to produce an overall development plan based on an academic plan for the approval of the University Senate and Council and

(b) to develop and present regional procedures for resource allocation within the University consistent with the development plan.

The post is available to be filled as soon as possible. Intending applicants are invited to obtain the information memorandum relating to this appointment from the Registrar, Room 1, University of Cape Town, Private Bag, Rondebosch 7700. Formal applications marked PERSONAL AND CONFIDENTIAL should reach the Principal and Vice-Chancellor not later than 18th July, 1977.

AUSTRALIAN NATIONAL UNIVERSITY RESEARCH SCHOOL OF CHEMISTRY

POSTDOCTORAL AND RESEARCH FELLOWS

Applications are invited for appointment as Postdoctoral Fellow or Research Fellow. Appointments will be for two or three years and may be made in the following areas:

- Organic Chemistry: [Professors: Dr. R. H. Richards, Dr. J. K. MacLeod, Dr. L. N. Mendler] - Structure determination, synthesis, and biologically-active compounds, model molecules, and other areas of synthetic organic chemistry, including chemical aspects of analytical, industrial, and agricultural chemistry. Organic Chemistry: [Professors: Dr. R. H. Richards, Dr. J. K. MacLeod, Dr. L. N. Mendler] - Theoretical Organic Chemistry: [Dr. L. A. Rodoni] - Organic chemical aspects of molecular orbital theory, particularly at the ab initio level. Structural Chemistry: [Professors: Dr. R. H. Richards, Dr. J. K. MacLeod, Dr. L. N. Mendler] - Development of associated computer programs.
- Inorganic Chemistry: [Dr. A. M. Sargison, Dr. O. A. Buckingham, Dr. M. A. Bennett] - Synthesis, structure, and reaction mechanisms of a wide range of transition metal complexes. Current interests include coordination chemistry, catalysis, and the synthesis of organometallic compounds. Inorganic Chemistry: [Dr. A. M. Sargison, Dr. O. A. Buckingham, Dr. M. A. Bennett] - Synthesis, structure, and reaction mechanisms of a wide range of transition metal complexes. Current interests include coordination chemistry, catalysis, and the synthesis of organometallic compounds.

The University receives the right not to make an appointment or to make an appointment by invitation at any time. There is no application fee. Applicants should supply to the Undersecretary of the University of Cape Town, the following information: a statement of research interests, together with two references; a curriculum vitae; a list of publications; and the probable date on which the Postdoctoral or Research Fellowship, if awarded, could be taken up.

G. E. DICKE, Academic Registrar.

THE UNIVERSITY OF THE WITWATERSBURG JOHANNESBURG

LECTURERSHIP IN FRENCH

Applications are invited for appointment to the above post in the Department of Romance Studies. The successful candidate will be required to teach French as a second language, but will also be expected to contribute to the Department's research programme in the field of French literature and culture.

Applicants should be in the range of 30-40 years of age, hold a B.A. or equivalent, and have a minimum of five years' postgraduate study in French literature and culture. Successful candidates will be offered a salary in the range R10,000-R12,000, plus a 10% pensionable allowance.

Applicants should send their applications, together with two references, to the Registrar, University of the Witwatersrand, 271 High Street, Johannesburg 2001. Applications will be considered on a rolling basis and will close on 15th July, 1977.

Applicants should send their applications, together with two references, to the Registrar, University of the Witwatersrand, 271 High Street, Johannesburg 2001. Applications will be considered on a rolling basis and will close on 15th July, 1977.

Universities continued

UNIVERSITY OF NATAL
Department of Mathematics and Applied Mathematics, Durban
REPUBLIC OF SOUTH AFRICA

Applications are invited from persons suitably qualified in either Pure Mathematics or Applied Mathematics for appointment to the post of

SENIOR LECTURER OR LECTURER

The successful applicant will be appointed as a Senior Lecturer or as a Lecturer according to his or her qualifications end/or experience, and will be expected in assuming duty on July 1, 1977, or as soon as possible thereafter.

The salary scales attached to the posts are — SENIOR LECTURER: R8,820 by R860 to R9,900 by R450 per annum; and LECTURER: R6,300 by R360 to R8,180 plus 10 per cent per annum.

The commanding salary notch will be dependent on the qualifications end/or experience of the successful applicant. In addition, an annual vacation savings bonus is payable, subject to Treasury regulations.

Application forms, further particulars of the post, and information on pension, medical aid, staff bus, housing loan and subsidy schemes, long leave conditions and travelling expenses on first appointment are obtainable from the Registrar, University of Natal, King George V Avenue, Durban, 4001, Republic of South Africa, with whom applications, on the prescribed form, must be lodged not later than May 20, 1977, quoting reference Adv. D7/77.

UNIVERSITY OF SINGAPORE
MICROBIOLOGY

Applications are invited for teaching appointments in the Department of Microbiology from candidates who must have first degrees either in Medicine or Science and relevant postgraduate qualifications. Preference will be given to candidates who have taught Microbiology in science colleges and have practical experience in Medical Microbiology or Industrial Microbiology. Gross monthly emoluments in the range from \$51,300 to \$54,750, approx., the initial amount depending on the candidate's qualifications and experience, and the level of appointment offered. The gross emoluments comprise basic salary and the National Wages Council wage allowances. In addition, the University offers a 13th month annual allowance of one month's salary in December of each year, and contributes to the staff member's provident fund at 15 per cent of basic salary and allowances. Leave, medical, subsidised University housing and other benefits are also available. Candidates should write to: The Registrar, University of Singapore, Singapore 10, giving curriculum vitae, list of references, full details of qualifications and also the names and addresses of three referees.

UNIVERSITY OF OXFORD
CAREERS ADVISER

Applications are invited for the post of Careers Adviser to join the staff of the Oxford University Appointments Committee. The work consists of interviewing graduates and undergraduates to help them decide on career fields which will suit them. It also involves the development of career advice materials, the holding of talks, and the maintenance of close contact with employers, and with the academic staff of the university.

The position is open to graduates in any subject. The preferred pay scale for this appointment would be within the range £5,421-£7,077, depending on qualifications.

Write for further details to the Secretary, Oxford University Appointments Committee, 56, Hatherly Road, Oxford.

NATIONAL UNIVERSITY OF LESOTHO
LECTURESHIP IN CHEMISTRY

Applications are invited for a post of Lecturer in Chemistry to teach in the Department of Chemistry at the National University of Lesotho. The successful candidate will be expected to teach inorganic, organic and physical chemistry. The salary scale is from R10,000 to R15,000 per annum.

UNIVERSITY OF LIFE-NIGERIA
DIRECTOR OF THE COMPUTER CENTRE

Candidates are invited for the post of Director of the Computer Centre at the University of Life-Nigeria. The successful candidate will be expected to manage the computer centre and to develop computer programmes for the university.

Universities continued

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY
LECTURER IN CREATIVE DESIGN

Applications are invited from graduates or equivalent for the post of Lecturer in Creative Design at Loughborough University of Technology. The successful candidate will be expected to teach design to students on the B.A. (Hons) Design course.

BIRMINGHAM UNIVERSITY
RESEARCH OFFICER IN APPLIED PSYCHOLOGY

Applications are invited for the post of Research Officer in Applied Psychology at Birmingham University. The successful candidate will be expected to conduct research in the field of applied psychology.

NEWCASTLE UPON TYNE THE UNIVERSITY
RESEARCH OFFICER IN APPLIED PSYCHOLOGY

Applications are invited for the post of Research Officer in Applied Psychology at Newcastle University. The successful candidate will be expected to conduct research in the field of applied psychology.

THE OPEN UNIVERSITY
STAFF POSITIONS IN THE SOCIAL SCIENCES

Applications are invited for staff positions in the Social Sciences at The Open University. The successful candidates will be expected to teach and conduct research in their respective fields.

LONDON THE UNIVERSITY COLLEGE
RESEARCH OFFICER IN APPLIED PSYCHOLOGY

Applications are invited for the post of Research Officer in Applied Psychology at University College London. The successful candidate will be expected to conduct research in the field of applied psychology.

CITY OF BIRMINGHAM THE POLYTECHNIC
RESEARCH OFFICER IN APPLIED PSYCHOLOGY

Applications are invited for the post of Research Officer in Applied Psychology at the City of Birmingham Polytechnic. The successful candidate will be expected to conduct research in the field of applied psychology.

LEICESTER THE POLYTECHNIC
RESEARCH OFFICER IN APPLIED PSYCHOLOGY

Applications are invited for the post of Research Officer in Applied Psychology at Leicester Polytechnic. The successful candidate will be expected to conduct research in the field of applied psychology.

EUROPEAN UNIVERSITY INSTITUTE
FLORENCE

For the forthcoming academic year, the European University Institute will be appointing teaching staff specializing in the following fields: —History and civilization (preference may be given to candidates whose research interests are in European History since 1500 or in History of Ideas); —Law; —Political science (especially international relations, political philosophy, end possibly public administration); —Economics (with an interest in international political economy); —to direct the research work of postgraduate students, who will normally be preparing a thesis for the doctorate of the Institute.

For the academic year, 1977-78, the following positions are vacant: —six professorial posts (one to three-year contracts); —four assistant posts.

An adequate knowledge of two of the Institute's official languages, namely Danish, Dutch, English, French, German and Italian, is required. Some knowledge of one or other of these languages is desirable.

Applications, together with a curriculum vitae and a list of publications (and two academic references for the assistant) should be sent to the:

European University Institute, Badia Fiesolana, Via dei Roccettini 5, I-50016 San Domenico di Fiesole (Firenze) Italy

UNIVERSITY OF ADELAIDE
Professor of Library and Information Studies

Applications are invited for the post of Professor of Library and Information Studies at the University of Adelaide. The successful candidate will be expected to teach and conduct research in the field of library and information studies.

UNIVERSITY OF MALTA
CHAIR OF PHYSICS

Applications are invited for the post of Chair of Physics at the University of Malta. The successful candidate will be expected to teach and conduct research in the field of physics.

UNIVERSITY OF THE WEST INDIES TRINIDAD
LECTURER IN INTERNATIONAL RELATIONS

Applications are invited for the post of Lecturer in International Relations at the University of the West Indies, Trinidad. The successful candidate will be expected to teach and conduct research in the field of international relations.

UNIVERSITY OF THE WITWATERSBURG JOHANNESBURG
ASSISTANT LECTURER

Applications are invited for the post of Assistant Lecturer at the University of the Witwatersburg, Johannesburg. The successful candidate will be expected to teach and conduct research in their respective fields.

UNIVERSITY OF MELBOURNE
RESEARCH FELLOWSHIPS

Several fellowships are awarded each year for full-time research in any department of the University. The successful candidates will be expected to conduct research in their respective fields.

NOTTINGHAM THE UNIVERSITY
DEPARTMENT OF LINE ART

Applications are invited for the post of Lecturer in Line Art at Nottingham University. The successful candidate will be expected to teach and conduct research in the field of line art.

NOTTINGHAM THE UNIVERSITY
DEPARTMENT OF LINE ART

Applications are invited for the post of Lecturer in Line Art at Nottingham University. The successful candidate will be expected to teach and conduct research in the field of line art.

ABERDEEN THE UNIVERSITY
S.B.R.C. STUDENTSHIP

Applications are invited for the S.B.R.C. Studentship at Aberdeen University. The successful candidate will be expected to conduct research in their respective fields.

OXFORD WOLFFSON COLLEGE
RESEARCH FELLOWSHIP

Applications are invited for the Wolffson Research Fellowship at Oxford University. The successful candidate will be expected to conduct research in their respective fields.

OXFORD WOLFFSON COLLEGE
RESEARCH FELLOWSHIP

Applications are invited for the Wolffson Research Fellowship at Oxford University. The successful candidate will be expected to conduct research in their respective fields.

LIVERPOOL MANCHESTER
RESEARCH FELLOWSHIP

Applications are invited for the Research Fellowship at Liverpool and Manchester Universities. The successful candidate will be expected to conduct research in their respective fields.

UNIVERSITY OF LONDON
CHIEF EXAMINER

Applications are invited for the post of Chief Examiner at the University of London. The successful candidate will be expected to examine candidates in their respective fields.

THE UNIVERSITY OF THE WEST INDIES TRINIDAD
TRANSLATOR/INTERPRETER

Applications are invited for the post of Translator/Interpreter at the University of the West Indies, Trinidad. The successful candidate will be expected to translate and interpret in their respective fields.

SOUTHAMPTON LA SAINTE TRINITY COLLEGE
LECTURER IN EDUCATION

Applications are invited for the post of Lecturer in Education at La Sainte Trinity College, Southampton. The successful candidate will be expected to teach and conduct research in the field of education.

RANGOR UNIVERSITY COLLEGE OF NORTH WALES
RESEARCH ASSISTANT

Applications are invited for the post of Research Assistant at the University College of North Wales, Bangor. The successful candidate will be expected to assist in research in their respective fields.

MONASH UNIVERSITY MELBOURNE, AUSTRIA
VISITING LECTURERS 1978

Applications are invited for the post of Visiting Lecturers at Monash University, Melbourne, Australia. The successful candidates will be expected to teach and conduct research in their respective fields.

CHICHESTER COLLEGE
LECTURESHIP IN MICROBIOLOGY

Applications are invited for the post of Lectureship in Microbiology at Chichester College. The successful candidate will be expected to teach and conduct research in the field of microbiology.

BIRMINGHAM THE UNIVERSITY
CENTRE OF WEST AFRICAN STUDIES

Applications are invited for the post of Lecturer in West African Studies at Birmingham University. The successful candidate will be expected to teach and conduct research in the field of West African studies.

LONDON UNIVERSITY COLLEGE
LECTURER IN APPLIED PSYCHOLOGY

Applications are invited for the post of Lecturer in Applied Psychology at University College London. The successful candidate will be expected to teach and conduct research in the field of applied psychology.

ST. ANDREW'S THE UNIVERSITY
PSYCHOLOGICAL LABORATORY RESEARCH ASSISTANTSHIP

Applications are invited for the post of Research Assistant in the Psychological Laboratory at St. Andrew's University. The successful candidate will be expected to assist in research in the field of psychology.

LONDON THE POLYTECHNIC OF CENTRAL LONDON
SCHOOL OF LAW

Applications are invited for the post of Lecturer in Law at the Polytechnic of Central London. The successful candidate will be expected to teach and conduct research in the field of law.

MANCHESTER THE POLYTECHNIC
DEPARTMENT OF ECONOMICS AND ECONOMIC HISTORY

Applications are invited for the post of Lecturer in Economics and Economic History at Manchester Polytechnic. The successful candidate will be expected to teach and conduct research in the field of economics and economic history.

UNIVERSITY OF LONDON
CHIEF EXAMINER

Applications are invited for the post of Chief Examiner at the University of London. The successful candidate will be expected to examine candidates in their respective fields.

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LONDON THE POLYTECHNIC OF CENTRAL LONDON
SCHOOL OF LAW

Applications are invited for the post of Lecturer in Law at the Polytechnic of Central London. The successful candidate will be expected to teach and conduct research in the field of law.

MANCHESTER THE POLYTECHNIC
DEPARTMENT OF ECONOMICS AND ECONOMIC HISTORY

Applications are invited for the post of Lecturer in Economics and Economic History at Manchester Polytechnic. The successful candidate will be expected to teach and conduct research in the field of economics and economic history.

2011 1350

POSTS IN GHANA

Applicants for all posts must have a British educational background with an appropriate degree and experience.

SCHOOLS

3 HEADS OF MATHEMATICS DEPARTMENTS

Nandom Secondary School, Nandom

To teach Mathematics up to "A" level, organize Mathematics Teaching throughout the School and liaise with the Ghana Association of Mathematics Teachers. Degree in Mathematics or with a substantial Mathematics component and 3-5 years' teaching experience essential. Teaching qualification desirable. Salary £4,010-£5,580 pa. 77 CS 86

Navrongo Secondary School, Navrongo

To teach Mathematics up to "A" level and organize the Mathematics Department. Degree in Mathematics or with a substantial Mathematics component and 5 years' teaching experience including "A" level Mathematics (preferably SMP) essential. Teaching qualification desirable. Salary £4,010-£5,580 pa. 77 CS 87

Tamale Secondary School, Tamale

To teach Mathematics up to "A" level and to organize the Mathematics Department. Degree in Mathematics or with a substantial Mathematics component and 5 years' teaching experience including "A" level Mathematics essential. Teaching qualification desirable. Salary £4,010-£5,580 pa. 77 CS 88

HEAD OF CHEMISTRY

Sixth Form Science College, Legon, Accra

To teach Chemistry to "A" level and organize the Chemistry Department. Degree in Chemistry with a substantial Chemistry component and at least 5 years' teaching experience at "A" level essential. Head of Department experience and teaching qualification desirable. Salary: £4,010-£5,580 pa. 77 CS 89

TEACHER TRAINING COLLEGE

HEAD OF RESOURCES DEPARTMENT

Technical Teachers College, Kumasi

To develop and teach a course in Educational Technology, to encourage staff to develop teaching materials and to organize the Resource Centre as a development centre for technical institutions. Degree and at least 5 years' experience in an Educational Technology Unit in tertiary education essential. Diploma in Educational Technology an advantage. Salary: £4,580-£5,818 pa. 77 CT 5

Contracts are for 4 years (shorter periods may be possible) and are governed by the British Council. They include the following benefits: return passage for the teacher and family; free accommodation; overseas allowances; allowances for children and boarding school fees; fares for children's holiday visits; outfit and baggage allowance; assistance with duty and freight on imported car; paid terminal leave. Please write, briefly stating qualifications and length of appropriate experience, quoting reference number(s) for further details and an application form to The British Council (Appointments), 85 Ovens Street, London W1Y 2AA.



OVERSEAS DEVELOPMENT

KNOW-HOW vital to developing countries

Malaysia Education Overseas Experts

- (a) Radio Production
- (b) Media Utilisation and Evaluation

At Educational Media Services, Sarawak, to undertake training, revitalize existing Schools Radio Service, supervisory work of Schools Broadcasting Staff; to establish, develop and evaluate Unit, conduct in-service course for teachers and script writers, train local counterpart. Applicants should have substantial appropriate experience with teaching background. Appointments 2 years.

Salaries according to qualifications and experience plus a taxable tax-free overseas allowance in range £1,415 to £3,580 per annum. Superannuation rights may be safeguarded. The posts are wholly financed by the British Government under Britain's programme of aid to the developing countries. In addition to basic salary and overseas allowances other benefits normally include paid leave, free family passage, children's education allowances and holiday visits, free access to medical and dental attention. Applicants should be citizens of the United Kingdom.

For full details and application form, please apply, quoting reference 317, indicating post concerned, to:-



Appointments Officer, MINISTRY OF OVERSEAS DEVELOPMENT, Room 301, Eland House, Stag Place, London SW1E 5JL

HELPING NATIONS HELP THEMSELVES

KELVIN GROVE COLLEGE OF ADVANCED EDUCATION BRISBANE, AUSTRALIA

Kelvin Grove College of Advanced Education in an autonomous, multi-vocational college specializing in the preparation of pre-school, primary and secondary teachers. It offers a wide range of intensive courses for teachers which include a four year degree program from 1977. Applications are invited for the position of:

LECTURER/SENIOR LECTURER IN HOME ECONOMICS REF. No. 77/A/9

QUALIFICATIONS:
1. A degree in Home Economics or Home Economics Education (preferably at Master's level or higher) with major studies in food preparation and/or food science including its application to food preparation.
2. Studies in one or more of the following areas would be an advantage: Home Management, Curriculum Development in Home Economics Education, Human Ecology, Nutrition.
3. Successful experience in teaching and developing Home Economics Programs at Secondary or Tertiary Levels.

DESCRIPTION:
The person appointed will be expected to work in the Home Economics Department within the Division of Science. The department is presently offering a Diploma of Teaching in Home Economics to pre-service secondary teachers and provides in-service courses to teachers in the upgrading of Diploma of Teaching and the Bachelor of Education. A person with initiative and energy is required, who can contribute to the above programs and to the development and introduction of a possible Bachelor of Home Economics degree which meets the needs of both schools and the community at large.

SALARY AND CONDITIONS OF SERVICE:
Lecturer I \$13,850-\$15,025 per annum
Lecturer II \$16,314-\$18,389 per annum
Senior Lecturer I \$18,794-\$20,170 per annum
Senior Lecturer II \$20,828-\$22,010 per annum
Conditions of service are comparable to those in universities and colleges of advanced education in Australia. Appointment will be made at a level appropriate to the qualifications and experience of the applicant.
DATE OF APPOINTMENT:
The successful applicant would be expected to take up duty as soon as possible after July 1, 1977. The College Council reserves the right to make an appointment or to appoint by invitation.
CLOSING DATE:
21 days from the appearance of this advertisement. Application forms and further details are available from the Registrar, Kelvin Grove College of Advanced Education, Victoria Park Road, Kelvin Grove, Brisbane, Queensland, 4058 AUSTRALIA.
R. W. BROWNLEE
ACTING REGISTRAR.

CANBERRA COLLEGE OF ADVANCED EDUCATION

SCHOOL OF YEARS EDUCATION Lecturers (Two) in Early Childhood Education

One appointment at Lecturer Grade I and one at Lecturer Grade II or at Lecturer Grade III or at Lecturer Grade IV. Particular strength in the areas of: (1) Early Childhood Education; (2) Social Science; and (3) Creative Arts in Early Childhood Education. Preference will be given to candidates with appropriate early childhood experience (3 to 5 years) and professional qualifications in the area of early childhood education. The successful applicant will be required to participate in an inter-disciplinary team in the planning and general operation of the School. Considerable experience and initiative for innovation and leadership for innovation and leadership are essential. The staff are involved in the development of a new program of study in the area of Early Childhood Education. The successful applicant will be expected to contribute to the development of this program. Applications should be sent to the Registrar, Canberra College of Advanced Education, P.O. Box 179, COBURG, MELBOURNE 3058.

Queensland Australia

Lecturer in Measurement and Instrumentation

(Salary \$A11,851 to \$A18,839 p.a.)

The Department of Applied Science at The Capricorn Institute of Advanced Education, Rockhampton, invite applications for the above lectureship for a contract period of two to three years.

The Department has a Bachelor Degree course in Applied Science (Physics) and a two-year Diploma in Applied Science. Both courses are available for external study and accreditation for a postgraduate course in Measurement is awaited.

The ideal candidate for this post will preferably have some industrial experience.

Forms of application and further information are available from the Office of the Agent General for Queensland, 392 Strand, London WC2R 0LZ.

Closing date: 20th May, 1977.

STATE COLLEGE OF VICTORIA AT COBURG MELBOURNE, AUSTRALIA

Applications are invited for the position of LECTURER/SENIOR TUTOR IN ORGANIZATION AND MANAGEMENT

DUTIES: To prepare and teach the principles of management applicable to service organizations. The students involved are people working or intending to work in a range of professions including teaching, social welfare, youth work and nursing. About half the applicants time will be spent in courses related to school organization and management. To conduct communication workshops for students undertaking management programmes. To be able to apply the techniques and processes of organization development to service organizations. To be able to supervise students undertaking research programmes at the Graduate Diploma level. To establish sound relationships with educational and other institutions.

QUALIFICATIONS: An appropriate university degree and a higher degree and experience in lecturing in management, and required. Preference will be given to applicants who have held positions in education management.

SALARY: Lecturer I \$A18,010-\$A18,805
Lecturer II \$A14,146-\$A16,221
Senior Tutor \$A12,147-\$A15,983

Applications should be sent as soon as possible. Details with the curriculum vitae should include age, marital status, qualifications, three references, one of whom must be a present or recent employer. The successful applicant will have the economy air fare for him/herself and family paid to Melbourne plus a negotiable allowance for removal expenses.

Appointments close on Monday, 18th May, 1977.

The Director, State College of Victoria at Coburg, P.O. Box 179, COBURG, MELBOURNE 3058.

SOUTH AUSTRALIAN INSTITUTE OF TECHNOLOGY School of Business Administration

Applications are invited for appointment to the position of SENIOR LECTURER IN PUBLIC ADMINISTRATION

To lead the further development of courses and Public Administration. The school offers a Bachelor of Business Administration major in its Bachelor of Business Administration and is currently planning the introduction of a Masters degree in Public Administration.

ANNUAL SALARY (Australian)
Within the following ranges according to qualifications and experience
Senior Lecturer Grade I \$20,828-\$22,010
Grade II \$18,795-\$20,170

Further information, application forms, and conditions of service may be obtained from the Staffing Officer, S.A. Institute of Technology, North Terrace, Adelaide, South Australia 5000, to whom applications, including the names and addresses of three referees should be forwarded.

Melbourne State College AUSTRALIA

EDUCATION RESOURCE CENTRE

TECHNICAL SERVICES LIBRARIAN

Applications are invited for the position of Technical Services Librarian in the Education Resource Centre of the Melbourne State College. The person appointed will assist the Chief Librarian in the formulation of library policy, and will be responsible for administering a division staff of approximately 28 charged with acquiring, processing and cataloguing a large annual volume of monographs, serials and non-book materials. Applicants should have professional library qualifications and a degree together with extensive relevant experience in a university or college library, preferably a library with automated systems. Proven administrative ability is essential as well as knowledge of modern library management techniques. Important attributes are the ability to plan carefully and to maintain good personal relations.

GRACE AND SALARY: Senior Librarian, \$A18,795-\$22,010 p.a. (The Australian dollar is valued at English £0.84).

The College, which is situated in the centre of Melbourne, is the largest tertiary institution in Australia devoted to the preparation of Primary, Secondary Teachers and School Librarians, Diploma and degree courses as well as Masters programs are offered in a wide selection of disciplines. Assistance with travel and removal costs will be given to the appointee and his family.

Applications giving personal and professional details, and naming three referees should be forwarded by May 25, 1977, to:

The Staff Officer, Melbourne State College, 757 Swanston Street, Carlton, Vic, 3058, Australia.

Telephone: (Melbourne) 341-8448. Inquiries may be addressed to the Chief Librarian at the address above. 7120

Colleges of Further Education

Queen Margaret College

EDINBURGH

HEAD OF DEPARTMENT OF SOCIAL SCIENCES

Applications are invited for this senior post from men and women well qualified in the Behavioural or Social Sciences and having good experience of teaching within Higher or Further Education. Queen Margaret College, founded in 1878, is a Scottish Central Institution offering courses at Certificate and Diploma level. The curriculum of the College includes full-time courses in Dietetics, Drama, Health Visiting, Home Economics, Institutional Management, Nursing, Physiotherapy, Social Work and Speech Therapy. Salary: £8,325 per annum (currently under review). Application forms and further particulars from The Secretary, Queen Margaret College, 38 Clerwood Terrace, EDINBURGH EH12 5TG. Telephone: 031-554 8111.

Cambridgehire

Applications are invited for the post of PRINCIPAL Huntingdon Technical College

which falls vacant in September, 1977, following the appointment of the present Principal to a larger College. The College, which is based in well-located modern buildings and has a good range of non-advanced courses, is in Burnham Group 4 (Salary £9,033).

Full particulars and application forms are obtainable from the Chief Education Officer, Shire Hall, Castle Hill, Cambridge CB3 0AP. Closing date 18th May, 1977.

General Vacancies

Centre for Information on Language Teaching and Research

(maintained by grants from the Department of Education and Science, the Scottish Education Department and the Department of Education, Northern Ireland)

DIRECTOR

Applications are invited for this post which will become vacant from January 1978 on the retirement of the present holder

Salary within range: £9,038-£10,759

Further information and application forms from: The Director, CLT, 20 Cavell House Terrace, London SW1Y 5AP. Closing date for applications: May 30

ilea INNER LONDON EDUCATION AUTHORITY

Technical Equipment Officer

Principal Clerk (B) required to be responsible, under the Assistant Education Officer (FHE), for advising on the provision of machinery and equipment for teaching purposes and its installation at all FHE establishments in the ILEA area. Applicants should have teaching experience in further and higher education and related industrial experience. Salary range: £7,800-£8,481 (inclusive of London Weighting and supplementary allowance).

Details and application forms from the Education Officer (EO/Estab RA1), Addington Street Annex, The County Hall, London SE1 7PB. Please enclose a stamped addressed foolscap envelope. Forms to be returned by 18 May 1977.

ilea INNER LONDON EDUCATION AUTHORITY

Inspector of Art and Design Education (District Rank)

required to inspect, advise upon and develop art and design studies in further and higher education establishments of the Authority. Applicants should possess appropriate qualifications and have had wide and distinguished teaching experience including some at a high level in a college of art. Professional achievement as artist or designer is desirable. Salary range: £8,880-£9,526 (inclusive of London Weighting) with possible progress to £10,546.

Details and application forms from the Education Officer (EO/Estab RA1), Addington Street Annex, The County Hall, London SE1 7PB. Please enclose a stamped addressed foolscap envelope. Forms to be returned by 18 May 1977.

SPORTS COUNCIL EDITING AND ANALYSIS OF DATA

The Sports Council wishes to be able to call on people who can, on a temporary and/or part-time basis, and sometimes at short notice: (1) Undertake secondary analysis of statistical data to summarize their substance (2) Condense or rewrite technical reports, sometimes for technical or sometimes for lay audiences. Relevant experience is needed for both tasks. Some journalistic or academic experience may be desirable for the second task. Ability to read and write in European languages an advantage. Anyone interested should write if possible by May 13, 1977, to the Principal Research Officer, The Sports Council, 70 Brampton Road, London SW8 5EX, giving academic and career experience and enclosing samples of their analysis or writing.

ADELAIDE COLLEGE OF ADVANCED EDUCATION

The College is situated in the city centre of Adelaide and offers courses providing academic and professional training for teachers in secondary schools in art, science, economics, commercial studies, music, drama, physical education and school librarianship. Provisions are offered to full-time, part-time and external (correspondence) students. At present the College awards a Bachelor of Education degree, an undergraduate diploma in teaching and various diplomas at the graduate level. Applications are invited for the following:

LECTURER IN SOCIOLOGY

The Sociology Department has four members teaching a range of courses in the general studies area of the Bachelor of Education degree. The students are mostly teachers in training, social field workers and mature aged. Applications are invited from persons with qualifications in the following areas: Political Economy of Mass Media and Contemporary Cultural Studies; Development and Under-development; Religion; Sexuality and Society.

Experience in one or more of the above areas and an interest in the Sociology of Education may be an advantage. The appointment may be offered either on a contract basis for a minimum period of two years or as a continuing appointment. Applicants should state their preference. Early appointment is anticipated and ability to take up the appointment quickly would be an advantage. Salary scales are: Lecturer, Grade I - \$A18,314-\$A19,369 Lecturer, Grade II - \$A13,850-\$A15,925 Lecturer, Grade III - \$A11,021-\$A13,097 (Salaries are at present under review) Applicants should give particulars of one present position and salary, academic and professional qualifications, teaching experience and any other information bearing on their ability to carry out the duties of the post. The names and addresses of three referees should also be included. Application should be made in duplicate, the original to be sent to the Administrative Assistant (Academic), Adelaide College of Advanced Education, 48 Huttore Avenue, Adelaide, South Australia. The copy to be sent to The Association of Commonwealth Universities (Apps), Sothen Square, London W1H 0PF. Applications close 30 May, 1977.

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